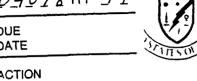
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Mr Martin Hestmark U S. Environmental Protection Agency, Region VIII ATTN Rocky Flats Project Manager, 8HWM-FF 999 18th Street, Suite 500 Denver, Colorado 80202-2405

Mr. Joe Schieffelin Hazardous Waste Facilities Unit Leader Colorado Department of Public Health and Environment 4300 Cherry Creek Drive South Denver, Colorado 80222-1530

#### Gentlemen:

Enclosed is the treatability test report for the Physical Separation Treatability Study The transmittal of this report is partial fulfillment of the November 12, 1994, milestone for the Site Wide Treatability Studies program

The objective of the study focused on the behavior of selected metals in various physical separation process unit operations. To study these behaviors, samples were taken from various products obtained during the TRU/Clean treatability study. These samples were then analyzed for the metals of interest and conclusions were drawn from the analytical results. Based on the results of this treatability study, the metals of interest were not effectively concentrated in the unit processes used in the TRU/Clean process. This may indicate that the metals were present as naturally occurring, low density minerals which would not respond strongly to gravity concentration techniques

The Department of Energy requests that you acknowledge the receipt of this report prior to November 4, 1994 If you have any questions please contact Norma Castaneda at extension 4226

Rec'd w/o ene.

CORRES, CONTROL ADMN RECORD/080 PATS/T130G

Reviewed for Addressee Corres Control RFP

Enclosure

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ven W. Slaton

Sincerely,

Steven W Slaten IAG Project Coordinator Environmental Restoration

Ref Ltr #

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J Schieffelin & M Hestmark 94-DOE-11013

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M Silverman, OOM, RFFO
K. Klein, OOM, RFFO
R Schassburger, ER, RFFO
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EG&G ROCKY FLATS, INC ROCKY FLATS PLANT, PO BOX 464, GOLDEN, COLORADO 80402 0464 • (303) 966 7000

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Norma I Castaneda Environmental Restoration Division DOE/RFFO

SUBMITTAL OF THE FINAL REPORT - PHYSICAL SEPARATION TREATABILITY STUDY -WSB-113-94

Attention M J Harris

Action None

Attached are thirteen (13) copies of the final report PHYSICAL SEPARATION TREATABILITY STUDY (Document Control Number RF/ER-94-0010 UN)

As you know, the regulatory agencies have directed the Department of Energy Rocky Flats Field Office and EG&G Rocky Flats, Inc to provide them with treatability study results from the Sitewide Treatability Studies Program no later than November 12, 1994 This final report satisfies that requirement

Please contact W J Roushey of the Treatability Studies/Feasibility Studies Team at extension 6951 or digital pager 1711 should you have any questions or comments

CORRES CONTROL ADMN RECORD/080 TRAFFIC PATS/T130G

Vanda S Busbyl Manager Operable Unit 2 Closure

Environmental Restoration Program Division

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**Attachments** 

As Stated (13)

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**ACTION ITEM STATUS** D PARTIAL/OPEN O CLOSED LTR APPROVALS



## Physical Separation Treatability Study

# Rocky Flats Operable Unit No. 2 Surficial Soil

Document Control Number RF/ER-94-0010.UN

#### RF/ER-94-0010.UN

## PHYSICAL SEPARATION TREATABILITY STUDY

#### ROCKY FLATS OPERABLE UNIT NO. 2 SURFICIAL SOIL

U.S. DEPARTMENT OF ENERGY
The Rocky Flats Environmental Technology Site
Golden, Colorado

**ENVIRONMENTAL RESTORATION PROGRAM DIVISION** 

OCTOBER 1994

Pg 3.651

Quality Assurance Program Manager R S Luker

Date

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#### 1.0 INTRODUCTION

#### 1.1 SITE DESCRIPTION

#### 1.1.1 Site Name and Description

Rocky Flats Environmental Technology Site (RFETS), a 6,550 acre industrial reservation is located in northern Jefferson County, Colorado RFETS lies on two major geological units unconsolidated surficial units (Rocky Flats Alluvium, various terrace alluvia, valley fill alluvium, and colluvium) underlain by Cretaceous bedrock (Arapahoe Formation, Laramie Formation, and Fox Hills Sandstone) Groundwater moves under confined conditions in surficial and shallow bedrock units Additionally, confined groundwater flow occurs in deeper bedrock sandstones Surficial soils are predominantly moderately deep to deep, well-drained clay loams of moderate to low permeability (Final Phase II RCRA Facility Investigation Remedial Investigation, Work Plan [Alluvial], U S Department of Energy, Rocky Flats Office, Golden, Colorado, 29 February 1991)

#### 1.1.2 History of Operation

From the mid-1950s to the present, RFETS has been a government-owned (U S Department of Energy [DOE]), contractor-operated facility that fabricated nuclear weapon components from plutonium (Pu), uranium (U), and other non-radioactive metals (principally beryllium (Be) and stainless steel) Plutonium was also recovered in the facility when it reprocessed components after they were removed from obsolete weapons

#### 1.2 WASTE STREAM DESCRIPTION

#### 1.2.1 Production Wastes

Radioactive and nonradioactive wastes were generated in the production processes Plant waste handling practices involved onsite and offsite recycling of hazardous materials, onsite storage of

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hazardous and radioactive mixed wastes, and offsite disposal of solid radioactive materials at other DOE facilities. In the past, hazardous, radioactive, and radioactive mixed wastes were stored and disposed onsite. Primary assessments under environmental remediation programs have identified some of these storage and disposal locations as potential sources of environmental contamination.

#### 1.2.2 Pollutants/Chemicals

The 903 Pad, located on the south eastern side of the plant, is a portion of Operable Unit No 2 (OU2) and covers an area 113 meters wide by 120 meters long. In 1958, waste drums were stored at this location. Contaminated soil was first discovered in 1964 in an area where 210 liter drums of plutonium-laden lathe coolant oil were stored. The drums contained cutting oil and carbon tetrachloride contaminated with plutonium and uranium cuttings from nuclear weapons components machining operations.

By 1968, all of the drums had been removed, processed, and shipped offsite for disposal The contaminated area was covered with a pad consisting of successive layers of fill dirt, gravel, and a final layer of asphalt. The level of contamination in the soil ranged between 2,000 to 300,000 disintegrations per minute (dpm)/100 square centimeters (cm<sup>2</sup>), with penetration depths of 3 to 20 cm. The plutonium metal was originally deposited as fine metallics. It oxidized into PuO<sub>2</sub> in the environment. The average size of the PuO<sub>2</sub> particles was 0.2 microns (Soil Decontamination Criteria Report, J. A. Hayden, et al, Rockwell International, November, 1990)

#### 1.2.3 Treatability Study Contaminants of Concern (COC)

For the purposes of this study, seven COC's were identified by the Colorado Department of Public Health and Environment (CDPHE) for investigation

- 1) Arsenic (As)
- 2) Barrum (Ba)
- 3) Beryllium (Be)
- 4) Cadmium (Cd)
- 5) Chromium (Cr)

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- 6) Lead (Pb)
- 7) Selenium (Se)

### 1.2.4 Programmatic Risk-Based Preliminary Remediation Goals (PPRGs)

PPRGs for residential soil are from the July 1994 document of the same name. The values are presented in Table 1 2 4-1. The values are risk-based and, in this case, are calculated for a residential exposure scenario.

Table 1.2.4-1 Programmatic Preliminary Remediation Goals

Analyte	As	Ва	Be	Cd	Cr	Pb	Se
PPRG (MG/KG)	3 66 E-01	1 92 E+04	1 397 E+02	1 02 E-01	III 2 04 E+06 VI 4 88 E+03	Not Established <sup>1</sup>	1 37 E+03

<sup>&</sup>lt;sup>1</sup>The Office of Solid Waste and Emergency Response (OWSER) of the EPA has recommended using the EPA Uptake Biokinetic (UBK) Model as a risk assessment tool to predict blood lead levels when predicting soil lead cleanup levels at CERCLA/RCRA sites (U.S. Environmental Protection Agency, Don R. Clay, OSWER, August 29, 1991) When the model is run with EPA's agency-wide lead strategy benchmarks, an acceptable soil level of approximately 500 ppm is predicted for the level of lead-cleanup in soil

#### 1.3 TREATMENT TECHNOLOGY DESCRIPTION

#### 1.3.1 Treatment Process, Description, and Operating Features

A detailed description of the TRU-Clean® Process can be obtained from the March 31, 1993 report entitled, "Plutonium in Soils Treatability Studies Rocky Flats Plant Operable Unit 2", by T K Wenstrand and T M Murarik This report describes all aspects of the Physical Separation Treatability Test, including operating features, performed by Lockheed Environmental Services and Technology (LESAT) of Las Vegas, Nevada on OU2 surficial soils which generated the residues sampled for this treatability study

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#### 1.4 Previous Treatability Studies at the Site

In addition to the LESAT Report, another soils treatability study was reported in August, 1994 entitled, "Rocky Flats Plant Soil Treatment Bench-Scale Treatability Studies (Nuclear Remediation Technologies Division, General Atomics-San Diego, California, GA-C21818) This study reported on preliminary characterization, flotation/attrition scrubbing tests, and leaching tests

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#### 2.0 CONCLUSIONS AND RECOMMENDATIONS

#### 2.1 CONCLUSIONS

This physical separation treatability study investigated the performance of various gravity concentrating and size separating unit operations that comprise the TRU-Clean® Process Overall, the TRU-Clean® process was ineffective in concentrating the seven COCs of interest. The most likely cause of the ineffectiveness was a lack of differences between the specific gravities of the COCs and the bulk of the remaining soil matrix. Although not specifically investigated, the results strongly indicate that the mineralogical specie were not a variety that were effectively concentrated using gravity concentrating devices. None of the size separation techniques were sufficiently effective either.

Overall, this treatability study found that the COCs did not concentrate when subjected to physical separation techniques. These results strongly imply that the COCs specified for the study were in the form of naturally occurring minerals. Had the COCs been placed into the environment as the result of plant operations, they would have probably been in metallic form. Furthermore, if the COCs had been in metallic form, the physical separation techniques employed here would have been effective due to the high density of metals versus the bulk soil

#### 2.2 RECOMMENDATIONS

#### 2.2.1 Mineralogical Investigation

Some mineralogical evaluation of surficial soils is warranted to aid future recommendations with regard to remediation investigations

#### 2.2.2 Pilot Study

Previous soils studies have focused on removing radionuclide contamination. Should a pilot plant study be conducted to remove radionuclides, the recovery of identified mineral COCs could be accomplished concurrently.

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#### 3.0 TREATABILITY STUDY APPROACH

#### 3.1 TEST OBJECTIVES AND RATIONALE

The objective of this study was to determine the ability of the unit operations employed in the LESAT Treatability Study as a remedial technology for the removal of the seven identified COCs in the form of elements of unknown mineralogy. The technology had previously been evaluated for its ability to remove radionuclide contamination from samples of RFETS soil. The rationale for this study was to expand this investigation to include the mineral COCs. Specifically, this study was initiated at the request of the CDPHE in correspondence dated February 18, 1994 to DOE/RFFO.

A Physical Separation Treatability Test was conducted by LESAT of Las Vegas, Nevada Samples of soil residues from that test were used for this treatability study. Details of the LESAT Program can be obtained from the March 31, 1993 Report, "Plutonium in Soils Treatability Studies Rocky Flats Plant Operable Unit 2," by T K Wenstrand and T M Murarik Since that formal report has been submitted to the Rocky Flats Field Office (RFFO) (NMH-065-94), it will be used as a reference, but not quoted in full. However, the *Integrated System for Treatability Study* diagram (See Fig. 4.1.7 from the LESAT Report) is reproduced in this report (See Fig. 3.1-1). This diagram can be used to compare the results presented in the following sections.

Samples were taken of identified feed and product streams to be used for evaluation of the following physical separation technologies

- Trommel Screen
- Spiral Classifier
- Attrition Scrubber
- Gravimetric Separator
- Hydrocyclone
- Centrifugal Concentrator

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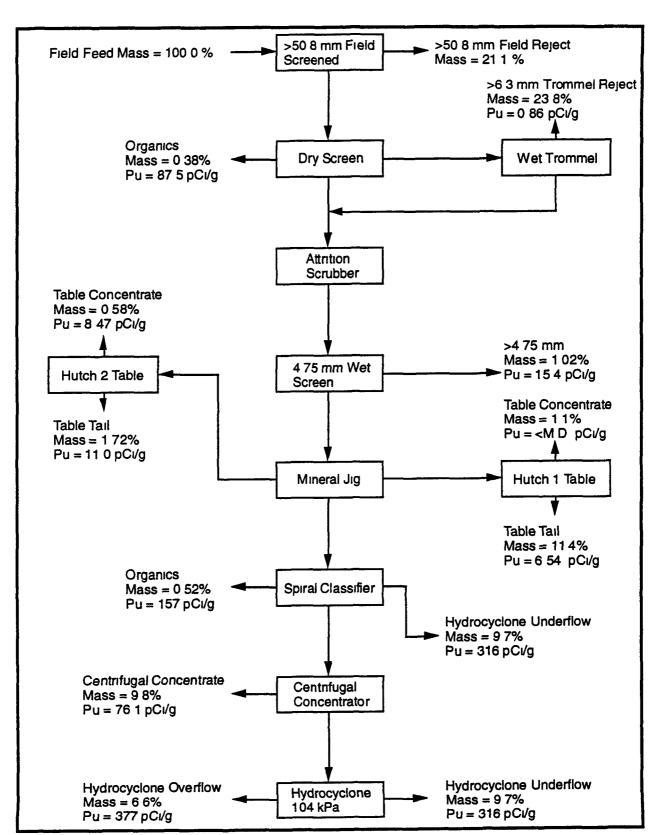


Figure 3.1-1 Integrated System for Treatability Study

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The multiple gravity separator identified by CDPHE to be analyzed in this study was omitted in the original LESAT Study. The hydrocyclone, however, was run and is included in this study.

Since the soils residue samples required repacking per RFETS waste procedures, a waste resampling and repacking plan was developed for this study. The Permacon, a controlled environmental facility located in Tent 10 on the 903 Pad, was used for this purpose. Samples were taken of the identified product streams and shipped to an offsite analytical facility for metals analyses.

#### 3.2 Sampling and Analysis

Sampling was conducted according to RFETS procedures L-3306-A, Waste Characterization

Sampling Procedure Inside the Protected Area (Effective Date 12/11/91), and L-6245-E, Sampling

Procedure for Waste Characterization (Effective Date 4/20/94)

Chemical analyses were conducted by Lockheed Analytical Services (LAS-Las Vegas, Nevada) EPA Procedure 6010 using Inductively Coupled Plasma (ICP) was used to detect barium, beryllium, cadmium, and chromium EPA Procedure 7000, *Graphite Furnace Analysis*, was used to detect arsenic, selenium, and lead

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#### 4.0 RESULTS AND DISCUSSION

#### 4.1 DATA ANALYSIS AND INTERPRETATION

#### 4.1.1 Analysis of Waste Stream Characteristics

This study focuses on the response of minus 50 8 mm soil to the identified unit operations. The original LESAT Study blended multiple drums of OU2 surficial soils to generate a composite feed material. An analytical aliquot was split out of that composited material. The results of that analysis represent the waste stream used as feed and investigated for this study. These values are compared to the PPRGs and the Rock Creek Study data (See Table 4.1.1-1). The Rock Creek Drainage Background Study is important to the Background Soils Characterization Plan (BSCP) and this study because it provides comparative values for the COCs.

Samples were collected in 1992 and 1993 from the Rock Creek Drainage Area (the Rock Creek data set) in the northwest quadrant of the buffer zone of RFETS. This data was collected in support of the Resource Conservation and Recovery Act. /Comprehensive Environmental Response, Compensation and Liability Act. (RCRA/CERCLA) investigations for OU1 and OU2 to establish a background soil chemistry for determining the nature and extent of contamination, and for human health risk-assessment purposes (*Background Soils Characterization Plan*, RFETS/ER-M-94-00022, May 1994)

The LESAT Feed values were consistently below the Rock Creek background values. The values for beryllium, cadmium, and chromium were an order of magnitude lower. The PPRG for arsenic at 0 366 MG/KG was an order of magnitude lower than the corresponding LESAT value of 3 5 MG/KG. The beryllium value of 0 63 MG/KG was also higher than the PPRG value of 0 149 MG/KG. The remaining LESAT values were consistently lower than the PPRGs, some were several orders of magnitude lower. Beryllium had been previously identified as a target contaminant in soils (Final Treatability Studies Plan [TSP], Section 5 2 1, August 26, 1991). Arsenic was not identified as a target contaminant in the TSP. When the LESAT Feed material

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from OU2 was compared, it was questioned whether there was a metals COC issue in light of all values found to be less than background

Table 4 1.1-1 LESAT Feed, PPRGs, and Rock Creek Study Soil Analyses

Analytes in MG/KG							
Description	As	Ва	Be	Cd	Cr	Pb	Se
LESAT Feed	35	102	0 63	0 78	85	26 9	0 47
PPRG	0 366	19020	0 149	137	4880 <sup>1</sup>	5002	13700
Rock Creek <sup>3</sup>	5 79	1997	1 55	1 35	15 21	37 62	0 60

 $<sup>^{1}</sup>$ Value for Cr+6, Value for Cr+3 = 2,040,000

#### 4.1.2 Analysis of Treatability Study Data

Metallic concentrations for the process streams produced as a result of the investigated LESAT unit operations are shown in Table 4 1 2-1 Consistent with the results presented in Section 4 1 1, arsenic and beryllium were above their respective PPRGs by up to two orders of magnitude. The remaining five metal COC were under their respective PPRGs which was also consistent with the results in Table 4 1 2-1. This data indicated that barium, cadmium, chromium, lead, and selenium were under their respective PPRGs and were not considered to be COCs. Arsenic and beryllium concentrations were above their PPRGs, however, when the untreated feed material (i.e., LESAT Feed) was considered. Arsenic and beryllium COC concentrations were below the background (Rock Creek) which indicated that arsenic and beryllium were not COCs.

4.1.2.1 Mass Balance for Overall Process—Table 4 1 2 1-1 provides individual metal mass balances around the overall process flow diagram shown in Figure 3 1-1 It should be noted that the product mass values shown in Figure 3 1-1 are taken from the LESAT Report

<sup>&</sup>lt;sup>2</sup>Value Derived from EPA Uptake Biokenetic Model as Described in Footnote 1 of Table 1 2 4-1

<sup>&</sup>lt;sup>3</sup>Table 3-9, Section 3 0, Page 18 of 25, Background Soils Characterization Plan, RFP/ER-M-9400022, May 1994

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Table 4.1.2-1 Unit Operations Stream Concentrations

Description	Product Mass-%	As MG/KG	Ba MG/KG	Be MG/KG	Cd MG/KG	Cr MG/KG	Pb MG/KG	Se MG/KG
Programmatic Risk-Based Preliminary Remediation Goals		3 66 E-01	1 902 E+04	1 49 E-01	1 37 E+02	III.2 04 E+06 VI 4 88 E+03	Not Est <sup>1</sup>	1 37 E+03
Dry Screen Organic	0 38	62 1	128	0 60	14	11 0	56 5	13
Dry Screen-Oversize	Internal Stream	598	1133	0 27	0 77	30	166	0 66
Dry Screen-Undersize	Internal Stream	619	112	0 78	080	122	375	0 90
Trommel-Oversize	23 8	171	7 4	0 02	0 80	0 99	8 4	225
Trommel-Undersize	Internal Stream	618	73 2	0 42	080	8.2	55 0	0 78
Wet Scrn Oversize (>4 Mesh)	1 02	173	590	0 31	0 81	65	25 1	228
Hutch 1 Table Concentrate	11	172	213	0 29	0 80	45	377	226
Hutch 1 Table Tailing	114	173	127	0 20	0 80	23	109	227
Hutch 2 Table Concentrate	1 72	173	145	0 20	0 80	33	188	227
Hutch 2 Table Tailing	0 58	61 4	743	0 38	0 79	10 9	170	0 60
Classifier Cleanout (Org)	0 52	171	23 7	0 20	080	28	25 3	225
Classifier Underflow	122	173	185	0 20	0 80	23	8 4	227
Centrifugal Concentrate	98	225	191	1 1	10	28 8	849	227
Hydrocyclone Overflow	66	172	241	1 5	11	34 4	111	226
Hydrocyclone Underflow	97	173	219	14	13	30 3	933	227

Note In Table 4 1 2-1, the sum of the product streams equals 78 8% The >50 8 mm material rejected in the field accounted for 21 1% for a total mass balance of 99 9%

<sup>1</sup>The Office of Solid Waste and Emergency Response (OWSER) of the EPA has recommended using the EPA Uptake Biokinetic (UBK) Model as a risk assessment tool to predict blood lead levels when predicting soil lead cleanup levels at CERCLA/RCRA sites (U S EPA, Don R Clay, OSWER, August 29, 1991) When the model is run with EPA's agency-wide lead strategy benchmarks, an acceptable soil-level of approximately 500 ppm is predicted for level of lead-cleanup in soil

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Individual values for metals were calculated by multiplying individual mass values from Figure 3 1-1 with the analytical values provided in Table 4 1 2-1 Those values were summed for a given metal and then individual percentages were derived for each unit operation (i.e., centrifugal concentrate) In this way, the overall distribution and behavior of a given metal can be tracked through the individual unit operations and overall process used in the Lockheed Treatability Study

Table 4.1.2.1-1 Mass Balance Values in Percent

Description	Product Mass-%	As %	Ba %	Be %	Cd %	Cr %	Pb %	Se %
Dry Screen Organic	0 38	13	22 8	5 9	13 1	79	41	03
Trommel Oversize	23 8	22 1	04	0 1	0	0 5	01	09
Wet Screen Oversize	1 02	10	29	1 4	0	2 9	11	26
Hutch 1 Table Concentrate	11	10	11	0 5	0	2 1	11 2	38 7
Hutch 1 Table Tailing	114	107	06	0 2	0	11	02	11
Hutch 2 Table Concentrate	1 72	16	07	0 2	0	16	04	19
Hutch 2 Table Tailing	0 58	20	13 1	22	0	4 8	12	01
Classifier Organic	0 52	05	12	0 4	0	11	05	26
Classifier Underflow	122	11 4	09	03	0	1 1	01	09
Centrifugal Concentrate	98	120	123	16.2	13 1	15 3	161	88
Hydrocyclone Overflow	66	62	11 9	27 9	26 3	20 1	252	11 4
Hydrocyclone Underflow	97	9 1	10 8	23 6	26 3	20 6	187	9 60
SUMS <sup>1</sup>	78 8	788	78 8	788	78 8	78 8	788	78 8

<sup>&</sup>lt;sup>1</sup>These sums and calculations are based on the minus 50 8 MM material and do not include the plus 50 8 MM material that was field screened and set aside as field reject. The plus 50 8 MM material accounted for 21 1% which, when summed with the material inventoried, results in 99 9% accountability.

The minus 50 8 MM (2 in ) material accounted for 78 8 percent of the total material. The remainder of the material was rejected in the field during sampling. The trommel oversize mass of 23 8 percent was the largest portion of the minus material, accounting for some 30 percent of the

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total The remaining process streams varied from 0 38 to 12 2 percent with no pattern to the distribution of mass

In addition, there was no pattern to the metals distribution. When 20 percent or more was used as the cutoff for a "significant" distribution of material to any process operation, there were few minerals which were successfully concentrated. The trommel oversize had 22.1 percent of the arsenic, the dry screen had 22.8 percent of the barium, the hydrocyclone overflow contained 27.9 percent of beryllium, 26.3 percent of the cadmium, 20.1 percent of chromium, and 25.2 percent of lead. The Hydrocyclone underflow contained 23.6 percent of the beryllium, 26.3 percent of the cadmium, and 20.6 percent of the chromium. These latter analytical values indicate that the values are split between the hydrocyclone underflow and overflow.

Although the hydrocyclone overflow had four metals in the plus 20 percent category, when compared to the hydrocyclone underflow, which had three (nearly four as lead was 18 7 percent) metals in the plus 20 percent, there was essentially no difference between the concentrated and tailings streams and no significant concentration of values

However, the material reporting to the hydrocyclone underflow was the smallest in particle size and should have had the highest concentration of all metals throughout. A classic metallurgical relationship exists among particle size, particle density, and metals concentration. As particle size decreases, particle density and metals concentration increases. That anticipated mineral behavior was not observed here. One explanation for this not being the case is that the COCs were not in a mineralogical form wherein the gravity concentrating unit operations were effective.

This behavior may be attributed to the nature of the treatability study because the unit operations were not run in a process string configuration where one unit operation provided the feed to the next unit operation on a continual basis. Material was fed on a batch basis from one unit operation to the next. The test was not conducted in a process string mode, thus equilibrium was never achieved. Batching the material through one unit operation at a time does not achieve equilibrium distribution of minerals and particles.

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Overall, no clear concentration of metals was found in any unit operation. The distribution of metals for individual unit operations is discussed in the following sections.

- **4.1.2.2 Distribution of Metals for Individual Unit Operations—**The following sections provide analytical and mass distribution data for each of the unit operations conducted in the treatability study
- 4.1.2.2 1 Dry Screen Results—Table 4 1 2 2 1-1 shows selected data for the dry screen unit operation. Although not specifically identified as one of the unit operations for analysis, the results for the dry screening operation are presented for overall evaluation. The undersize material contained between 69 to 89 percent of the analyzed metals which followed the 69 percent of the mass that reported to this fraction.

Table 4.1.2.2-1 Dry Screen Results

Analyses MG/KG	As	Ва	Ве	Cd	Cr	Pb	Se	Stream Fraction
Oversize	59 8	1133	0.27	0 77	30	166	0 66	
Undersize	61 9	112.0	0 78	0 80	122	375	0 90	
Organic	62 1	1280	0 60	1 4	11 0	56 5	13	
Distribution								
Oversize, %	29	30	13	29	10	16	24	0 30
Undersize, %	70	69	86	70	89	83	75	0 69
Organic, %	1	1	1	1	1	1	1	0 01

4.1.2.2.2 Wet Trommel Results—Table 4 1 2 2 2-1 shows selected data for the wet trommel unit operation. This data indicated significant concentrations of all minerals, except selenium, in the undersize fraction. However, this apparent concentration effect was due to 70 percent of the mass reporting to the undersize fraction rather than a true concentration effect. Selenium showed an anomalous behavior as 92 percent of the selenium reported to the oversize. This result was not anticipated because minerals are typically concentrated in the finer sized fractions.

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Table 4.1.2.2.2-1 Wet Trommel Results

Analyses MG/KG	As	Ва	Be	Cd	Cr	Pb	Se	Stream Fraction
Oversize	17 1	7 4	0 20	0 80	0 99	8 4	22 5	
Undersize	61 8	732	0 42	0 80	82	55 0	0 78	
Distribution								
Oversize, %	11	4	17	30	5	6	92	0 30
Undersize, %	89	96	83	70	95	94	8	0 70

4.1.2.2.3 Attrition Scrubber Results—Feed to the attrition scrubber was a combination of wet trommel undersize and dry screen undersize. The product of the attrition scrubber was passed directly through to the wet screen Samples were not taken of the attrition scrubber product so an analysis was not possible

4.1.2.2.4 Wet Screen Results—Table 4 1 2 2 4-1 shows selected data for the wet screen unit operation Wet screening results indicated that the COCs followed 98 percent of the mass that reported to the undersize There was essentially no selective concentration that took place when the feed material was compared to the undersize on a metal by metal basis

Table 4.1.2.2.4-1 Wet Screen Results

Analyses MG/KG	As	Ва	Be	Cd	Cr	Pb	Se	Stream Fraction
Feed Material (Atrillon Undersize)	11:25:	10,574.5	, , , , , , , , , , , , , , , , , , ,	10.0%	77.EE		220	
Oversize	173	59 0	031	0 81	65	25 1	22 8	
Undersize		407.EZ	0.73	0.84	8600	75(19)	7220	
Distribution								
Oversize, %	2	1	1	2	1	1	2	0 02
Undersize, %	98	99	99	98	99	99	98	0 98

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4.1.2.2.5 Gravity Separation (Mineral Jig) Results—Table 4 1 2 2 5-1 shows selected data for the mineral jig unit operation. Most of the metals subjected to the action of the mineral jig followed 72 percent of the mass that reported to the undersize. There was essentially no selective concentration that took place especially when the feed material was compared to the undersize on a metal by metal basis.

Table 4.1.2.2.5-1 Mineral Jig Results MG/KG

Analyses MG/KG	As	Ва	Ве	Cd	Cr	Pb	Se	Stream Fraction
Feed Material Wet Screen Undersize)		i 07-4	0.23	(Cex		(i. (i)	2/241 3/241 3/241 3/241 3/241	
Mineral dig		(2015) (2015)		(i) (i)	97(8)	egiles Session	2686 8886	
Miheral Jip <b>a</b> Indersize <sup>2</sup>	(i) G	. ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ;	(\$3.5)	(1)	•	(:a)	27	
Distribution								
Oversize, %	31	5	9	23	6	19	25	0 28
Undersize, %	69	95	91	77	94	81	75	0 72

<sup>&</sup>lt;sup>1</sup>The oversize portion of the minerals jig contains the more dense mineral particles

4 1 2.2.6 Gravity Separation (Table) Results—The two hutch concentrates from the jigging operation were individually subjected to gravity concentration through the use of a tabling operation. Table 4 1 2 2 6-1 shows selected data for the tabling unit operation. With the exception of lead, in the table concentrate from Hutch 1 feed, the remaining metals followed the 78 percent of the mass that accounted for Hutch 1 Tailing. Since tabling was a gravity concentrating unit operation, it was expected that minerals of higher density would selectively be concentrated in the table concentrates. The fact that most of the metals reported to the tailing for Hutch 1 was not expected. The analytical value of 377 MG/KG for lead was almost two orders of magnitude higher than the feed material value of 39 MG/KG. Somewhat anomalous results were seen for arsenic

<sup>&</sup>lt;sup>2</sup>The undersize portion of the minerals jig contains the less dense mineral particles

Note The shaded areas indicate that the data was calculated for each analyte from the weighted averages of all products. In this instance, all values were calculated as no individual streams were analyzed.

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and barium in the tailing for Hutch 2 Both of the analytical values were roughly three to four times higher than their feed values Mineral specie typically do not concentrate in tailing streams

Table 4.1.2.2.6-1 Table Results MG/KG

Analyses MG/KG	As	Ва	Be	Cd	Cr	Pb	Se	Stream Fraction
Fieed Materials (Minaras III) Oversized)	/2 <u>2/</u> :::	70.48 -	9.22 <b>6</b>		3.4 <b>5</b>		21. F	
Table Concentrate Hutch 1	172	213	0 29	0 80	45	377	22 7	
Table Tailing Hutch 1	173	127	0 20	0 80	23	109	22 7	
Table Concentrate Hutch 2	173	145	0 20	0 80	33	188	22 6	
Table Tailing Hutch 2	61 4	743	0 38	0 79	109	170	0 60	
Table Concentrate Hutch 1	6	8	10	7	10	72	8	0 07
Table Tailing Hutch 1	59	47	67	78	50	21	87	0 78
Table Concentrate Hutch 2	3	3	4	4	4	2	5	0 04
Table Tailing Hutch 2	32	42	19	11	36	5	0	0 11

<sup>&</sup>lt;sup>1</sup>The oversize portion of the minerals jig contains the more dense mineral particles

Note The shaded area indicates that the data was calculated for each analyte from the weighted averages of all products

4.1.2.2.7 Spiral Classifier Results—Table 4 1 2 2 7-1 shows selected data for the spiral classifier unit operation. Spiral classifiers are processing devices used, in most applications, to make a size separation and concentrate materials. This data gave the impression that the spiral classifier concentrated in excess of 90 percent of the barium, beryllium, chromium, and lead into the classifier overflow. Although the classifier overflow analytical values for these metals were higher than their respective feed values, the concentration effect was more the result of the 68 percent pass value of the stream.

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Table 4.1.2.2.7-1 Spiral Classifier Results

Analyses MG/KG	As	Ва	Be	Cd	Cr	Pb	Se	Stream Fraction
Feed (Milieral Jic. Universiza)	(6.6 (4.4)	1849 J.	0.677 3.757.43		19 A 18 A 18 A 18 A 18 A	62.0	27.7	
Grefickies (S	9.72	31323	112	Eu (a)	27.53	: 77.5	(227)	
Underflow	173	18 5	0 20	0 80	28	8 4	22 7	
Organics	17 1	23 7	0 20	0 80	28	25 3	22 5	
Distribution								
Overflow, %	70	96	93	74	95	95	68	0 68
Underflow, %	29	4	7	25	5	4	31	0 31
Organics, %	1	0	0	1	0	1	1	0 01

4.1.2.2.8 Centrifugal Concentrator Results—Table 4 1 2 2 8-1 shows selected data for the centrifugal concentrator unit operation. The centrifugal concentrator was ineffective as a concentrating device for the COCs. There was little difference between the analyses of the feed material and the concentrate. The distribution of metals followed the mass distribution of the two streams.

Table 4.1.2.2.8-1 Centrifugal Concentrator Results

averages of all products

Analyses MG/KG	As	Ва	Be	Cd	Cr	Pb	Se	Stream Fraction
Feed Material Splint Classifier Overflow)	19 <b>.</b>	r eta e	Î.A.		271		72.3	
Concentrate	22 5	191	11	10	288	849	22 7	
TENING.	7.32	27.5	(1/2)	1.2	2674	(i):	227	
Distribution								
Cocentrate, %	44	44	36	33	39	36	38	0 38
Tailing, %	56	64	64	67	61	64	62	0 62

Pg 2906 51

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4.1.2.2.9 Hydrocyclone Results—Table 4 1 2 2 9-1-1 shows selected data for the hydrocyclone unit operation. The hydrocyclone, like the centrifugal concentrator, was ineffective as a concentrating device for the COCs. There was little difference between the analyses of the feed material and the concentrate. The distribution of metals followed the mass distribution of the two streams. The hydrocyclone, like the spiral classifier, is a processing device used in most applications to make a size separation. The hydrocyclone does not concentrate materials based upon specific gravity differences.

Table 4.1.2.2.9-1 Hydrocyclone Results

Analyses MG/KG	As	Ва	Be	Cd	Cr	Pb	Se	Stream Fraction
Feed Material (Gentifical) Concentration)		2228 3323 3333	6 (4) 3 (4)		3203		22.7	
Overflow	173	241	15	11	344	111	22 6	
Underflow	173	219	14	1 3	303	933	22 7	
Distribution								
Overflow, %	40	43	42	37	44	45	40	0 40
Underflow, %	60	57	58	63	56	55	60	0 60

Note The shaded area indicates that the data was calculated for each analyte from the weighted averages of all products

4.1.2.3 Specific Gravity Values for COC Mineral Specie—Gravity concentration is dependent upon the degree of difference between the specific gravity of the mineral specie that is desired to be concentrated or separated from the larger portion of material having a lower specific gravity. For example, PbS at a specific gravity of 7 5 can be separated from SiO<sub>2</sub> which has a specific gravity of 2 65 using gravity concentrating unit operations. For a gravity concentrating operation to be successful on soil, the specie that are desired to be separated must exist in appropriate mineralogical forms and requires a sufficiently high specific gravity in comparison to the other portion of the material (the bulk portion of the soil)

Table 4 1 2 3-1 contains naturally occurring mineral specie and their corresponding specific gravities for the seven COCs of this study. It should be noted that an extensive literature survey

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was not performed with regards to potential mineralogical forms for the identified COCs According to the reference, not all of the COCs have naturally occurring forms. No extensive mineralogical information is known about the soil feed material used in this study. However, the bulk of the minerals identified as occurring naturally do not exhibit high enough specific gravities to result in successful recovery through gravity concentration techniques. The low separation recoveries experienced in this treatability study would be explained by this interpretation

Table 4.1.2.3-1 COC Mineral Specific Gravities 1

Arsenic	Barrum	Beryllium	Cadmium	Chromium	Lead	Selenium
As <sub>2</sub> O <sub>3</sub> -3 87	BaCO <sub>3</sub> -4 43	BeA1 <sub>2</sub> O <sub>4</sub> -3 76	CdS-4 82	No	PbCO <sub>3</sub> -6 6	No
As <sub>2</sub> O <sub>3</sub> -4 15	BaSO <sub>4</sub> -4 50	BeO-3 01		Natural	PbS-7 5	Natural
As <sub>2</sub> S <sub>2</sub> -3 35		Be <sub>2</sub> SiO <sub>4</sub> -3 0		Occurring	PbSO <sub>4</sub> -62	Occurring
		Be <sub>2</sub> (OH)BO <sub>3</sub> -2 35		Listings		Listings

Data from the 75th Edition of the Handbook of Chemistry and Physics, CRC Press, 1994

#### 4.1.4 Comparison To Test Objectives

The objective of this treatability study was to determine whether the physical separation and gravity concentrating operations that make up the TRU-Clean® Process would effectively remove the seven COCs from RFETS OU2 soil Results are presented in Table 4 1 2-1, Unit Operations Stream Concentrations and indicate that concentration of the COCs was not effected. Further, soil background data (See Table 4 1 1-1, LESAT Feed, PPRGs, and Rock Creek Study Soil Analyses) for the seven identified COCs are below the PPRGs, indicating that five of the seven elements identified may not be COCs. Arsenic and beryllium may be exceptions

#### 4.2 QUALITY ASSURANCE/QUALITY CONTROL (QA/QC)

In addition to those procedures specified in Section 3 2, Sampling and Analysis, QA/QC were maintained through the use of Sample Management Office (SMO) procedures Those procedures were L-8001-A, SMO Database Input Process (Effective Date 2/28/94), and L-8000-A, Sample

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Packaging and Shipping Procedure (Effective Date 1/11/94) Samples were shipped to the analytical facility per Rocky Flats Transportation Safety Manuals, PADC-94-01279

Duplicates were collected for analysis and all values were within the 20 percent Relative Percent Difference Criteria or within five times the instrument detection limits

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#### 5.0 REFERENCES

Final Phase II RCRA Facility Investigation Remedial Investigation, Work Plan (Alluvial), U S Department of Energy, Rocky Flats Office, Golden, Colorado, February 29, 1991

Hayden, J A, et al Rockwell International, "Soil Decontamination Criteria Report," November 1990

Rocky Flats Plant Soil Treatment Bench-Scale Treatability Studies, Nuclear Remediation Technologies Division, General Atomics-San Diego, California, Georgia, C21818

Wenstrand, T K, Murarik, T M, "Plutonium in Soils Treatability Studies Rocky Flats Plant Operable Unit 2," Lockheed Environmental Systems & Technologies, Inc., March 31, 1994

# Appendix A Acronym List

As Arsenic

Ba Barium

Be Beryllium

BSCP Background Soils Characterization Plan

Cd Cadmium

CDPHE Colorado Department of Public Health and Environment

CERCLA Comprehensive Environmental Response, Compensation

and Liability Act

cm2 square centimeters

Cr Chromium

COC Contaminants of Concern

DOE Department of Energy

dpm Disentegrations per Minute

EPA Environmental Protection Agency

LESAT Lockheed Environmental Services and Technology

MG/KG milligram/kilogram

OU Operable Unit

OWSER Office of Solid Waste and Emergency Response

Pb Lead

PPRG Programmatic Risk-based Preliminary Remediation Goal

RCRA Resource Conservation and Recovery Act

RFEDS Rocky Flats Environmental Database System

RFETS Rocky Flats Environmental Technology Site

RFFO Rocky Flats Field Office

Se Selenium

TRU Transuranic Waste

TSP Total Suspended Particulates

UBK Uptake Biokinetic

# Appendix B Data Summaries

#### LEGEG ROCKY FLAIS

#### INTEROFFICE CORRESPONDENCE

DATE.

January 8, 1993

TO

O Erlich, Environmental Science and Engineering, Bldg. 51, 273-6110

FROM:

P A. Kiefer, Sample Management, Bldg. 080, X8698 Fully

SUBJECT.

SAMPLE NUMBERS AND LOCATION CODES FOR SITEWIDE TREATABILITY STUDY

TRU- CLEAN - PAK-002-93

Please direct your Woodward-Clyde sampling crews to use the following location codes and sample numbers for the surficial soil samples collected for Sitewide Treatability Study TRU-CLEAN.

LOCATION CODES.

SS000193 and SS000293

SAMPLE NUMBER BLOCK OF NUMBERS

BLUCIC 55

SS00500WC through SS00520WC

If you require additional numbers, then contact me.

klb

cc:

W S. Busby

C. Sunaberg

D Scruggs

EG&G ROCKY FLATS, INC. ROCKY FLATS PLANT P.O. BOX 464, GOLDEN, COLORADO 80402-0464 (303) 966-7000

SI MATRIX	30 .	Sample Number Smpl Date Anal Date	Smpl Date	Anal Dat	2	21D Group	Chemical	Result	Unit Fron	100	-	\$	5
00193 \$5 5011	1410	2116		: ;	• 1				:			**	CNX ZNX
C/S	DEAL	TIOGOTICE	02-3UN-93	= :	_ '	VOACLP	1,1,1-TRICHLOROETHANE	9	DG/KG	=	<b>L</b>	; ; :	•
\$8	REAL	110000116	26-NDC-20	= :		VOACLP	1, 1, 2, 2-TETRACHLOROETHANE	e 6	UG/KG	=	<b>.</b>	 { :	
	PFAL	1100011	- NOT - 20	~ •		VOACLP	1, 1, 2-TRICHLOROETHANE	9	DG/KG	=	<b>.</b> .	 5 :	
00193 \$5 5011	DEAL		A HOT - YOU	= :		VOACLP	1,1-DICHLOROETHANE	9	IIG/KG	=	۱ ۷	ζ:	
SS	1 4 1 0		- Nor-20			VOACLP	1,1-DICHLOROETHENE	•	UG/KG	9 5	<b>~</b> ш	 5 :	
ű	707	11000011	76-YOF-20			BNACLP	1,2,4-TRICILOROBENZENE	170	54/5T	<b>:</b>	'n	- ·	
, ,	KEAL	11000011	6-NDF-20	~	•	BNACLP	1.2-DICHLOROBENZENE	276	04/50 10/4/01	<b>&gt;</b> :	2	_ :	
2 5	REAL		05-JUN-93	_	3 TRG	VOACLP	1.2-51CH OBOSTUANS	·	UG/KG	<b>&gt;</b> :	330	<b>-</b> ≤	
2	REAL	11000011	02-JUN-93	_	-	VOACLP	1 2-bical observent	۰,	ng/Kg	<b>&gt;</b>	'n	- -	
SS	REAL	11000011E	02-JUN-93	-		VOACLB	1, t - DICALOROE   RENE	۰ ص	UG/KG	<b>-</b>	'n	٦٨ ١	
	REAL	1100001LE	D2HIM-07	: 8		4000	1, 2 -UICHLOROPROPANE	•	UG/KG	=	Ľ	1	
100193 SS SOIL	REAL	11000011 F	02- mm-01			BRACLP	1, 5-DICHLOROBENZENE	370	UG/KG	=	110	 <b>:</b> :	
100193 SS SOIL	REAL	T1000011 E	02 - 10 M			BNACLP	1,4-DICHLOROBENZENE	370	UG/KG	· =	200	- • 5 :	
	REAL	1100011	X-MUC-20			BNACLP	2,4,5-TRICHLOROPHENOL	1800	DE/KG	=			
SS	BFAI	1100011	A-Nnr-20		_ '	BNACLP	2,4,6-TRICHLOROPHENOL	370	ne/re	<b>&gt;</b> =			
SS	DEAL	1100011	-K-NDF-70			BNACLP	2,4-DICHLOROPHENOL	370	54/50	<b>-</b> :	000	_ Y	
SS	DEAL	1100011	56-NOT-20			BNACLP	2,4-DIMETHYLPHENOL	370	04/00	<b>:</b> c	250	- Y	
	1 7 1 4	11000011	- NOT- 20		-	BNACLP	2.4-DINITROPHENOL	1800	54/50 54/50	<b>-</b> :	250 5		
y Y	REAL		56-Nnf-20		_	BNACLP	2.4-DINITROTOLDENE	<b>4</b> 70	24/20	<b>ə</b> :	1600		
3	REAL		6-NDC-20		3 TRG	BNACLP	2.6-DINITROTOLIENE	22	04/FG	<b>&gt;</b> :	330	- Y	
; ;	ACA!	TIOCOLLE	05-Nnr-20		3 TRG	VOACLP	2-BUTANONE	2 -	UG/KG	<b>-</b>	330	<b>-</b> <b>≺</b>	
9 6	KEAL		02-JUN-93	•	3 TRG	BNACLP	2-CM OBOUADHTHAI ENE	7.2	UG/KG	<b>-</b>	2	<b>-</b> ≺	
2	REAL		02-JUN-93	• •	_	BNACLP	2-FHI OPOBIEMOI	5,5	ng/kg	<b>=</b>	330	- 4	
2	REAL		02-JUN-93		_	VOACIP	2-MEVANONE	2.	UG/KG	=	330	<b>-</b> <b>-</b>	
25	REAL	1100001LE	02-JUN-93	, ,	-	RNACID	2-METRICA MARIETTERS THE	= {	UG/KG	<b>=</b>	<b>•</b>	4	
S	REAL	-	02-JUN-93		_	PHACE	2 METHAL PHANCE	370	UG/KG	<b>-</b>	330	JA 1	
S	REAL	-	02-JUN-93			BUACL	2-nernithmenol	370	UG/KG	2	330	- X	
SS	REAL	1100001LE	02-JUN-93			BUACE	2 MITEOMETRIAL	1800	UG/KG	>	1600		
w	REAL	11000011	02-JIN-93		_	TIO TO THE	Z-NITROPHENOL	370	UG/KG	<b>&gt;</b>	330		
300193 SS SOIL	REAL	T100001LE	02-JUN-03		_	DIACLF	3,3'-DICHLOROBENZIDINE	750	UG/KG	=	9		
	REAL	11000011	02-MIN-03		-	BUSCLE	S-NI TROANIL INE		UG/KG	=	1600		
	REAL		02-JUN-93		•	BNACLF	4,6 DINITRO-2-METHYLPHEND		UG/KG	<b>-</b>	1600		
	REAL	1100001LE	02- JIM-03		•	PHACLP	4 - CIILORO - 5 - METHYLPHENOL	370	UG/KG	<b>-</b>	330		
	REAL	1100001LE	02-JUN-03		7 2 2	BNACLP	4-CHLOROANILINE		UG/KG	=	25	; =	
	REAL	11000011E	02- HW-03			BNACLP	4-CHLOROPHENYL PHENYL ETH	H 370	UG/KG	=		 	
25	REAL	1100001LE	02-MH-93			VOACLP	4-HETHYL-Z-PENTANONE	=	UG/KG	=	=	 { =	
000193 SS SOIL	REAL	1100001LE	02-JIIN-93		-	BAACLP	4 - ME INTLPHENOL	370	UG/KG	=	230	; <u>=</u>	
000193 SS SOIL	REAL	1100001LE	02-MIN-94			BNACLP	4-NITROANILINE	1800	UG/KG	=	1,50		
000193 \$\$ \$011.	REAL	1100001LE	02-JIIM-03			BNACLP	4-NITROPHENOL	1800	UG/KG	=	160		
SS	REAL	1100001LE	02-MM-03			BNACLP	ACENAPHTHENE	370	UG/KG	=	2 2		
22	REAL	_	02-JUN-93			BRACLP	ACENAPHTHYLENE	370	UG/KG	<b>=</b>	25.5	- ; =	
S	REAL		02-JUN-93			CUETCLE	ACETONE	Ē	UG/KG	=	2	07 V	-
SS	REAL	T100001LE	02-JUN-93			Busco	ALUMINON	9170	MG/KG	t	7	• • • >	-
000193 SS SOIL	REAL	T100001LE	02-JIM-01			פוניוני	AMIRKACENE	370	UG/KG	<b>-</b>	2 2	. =	
. 000193 SS SOIL	REAL		02- HIM-02			אנורה	ANITHONY	14.8	MG/KG	•	2 5	<u> </u>	
SS	REAL		02-30H-73			SHETCLP	ARSENIC	3.5	MG/KG		<u>-</u> ~		
	REAL		02-30H-7	::		SHETCLP	BARIUM	102	MG/KG		. S		;
SS	REAL	11000011E	02- MM-52			VOACLP	BENZENE	9	UG/KG	=	2 4	7 . Yr	Ξ
SS	REAL	11000011 F	02-41M-03	20-NOT-83		BNACLP	BENZO(B)ANTHRACENE	370	UG/KG	<b>-</b>	2.2	 5.	
000193 SS SOIL	REAL	11000011	02- HW-61			BNACLP	BENZO(a)PYRENE	077	UG/KG	•	077	- ·	
\$2			02-JUN-93	29-10K-95		BNACLP	BENZO(b) FLUORANTHENE	570	UG/KG		97.6	 5 :	
SS		1100001LE	02-308-93 02-1814-04			BNACLP	BENZO(ghi)PERYLENE	360	UG/KG	-	0 6	 5 .	
.000193 SS SOIL			02- HW-07	-	3 2 2	BNACLP	BENZO(k) FLUORANTHENE	140	UG/KG	, -	טיר פיני	 < •	
			:	-		BHACLP	BENZOIC ACID	1800	UG/KG	. 5	1600	< =	
										ì	>>>	- 5	

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By 13 of 51

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DC Sample M	rber Sm	2 :	ID Group	Chemical	Result	Unit	Error	Que C		VA RH1		FN4
T00001LE	02-JUN-93	29-JUN-93	BNACLP	PENTACHLOROPHENOL	1800	UG/KG			1600	-	:	:
	02-JUN-93		BUACLE	PHENANTHRENE	25	UG/KG		7	330 A	-		
1100001LE	02-JUN-93	24-1011-93	SHETCIP	POTACEIM	25	<b>26/K</b> G		- -	330	+ 4		
	32-JUN-93	29-JUN-93	BNACLP	TO ASSESSED TO ASS	067	F6/KG			1000			
	25-JUN-93		SPETCLP	SELENIUM	27	04/50 04/50		.,	7 OS.	- I		
1100011E	02-JUN-93	•	SHETCLP	SILVER	10	MG/KG		- ·	- e	~ »		
TOUGOILE	32-31M-93		SHETCLP	WI COOS	423	MG/KG		) E		n < _		
<b>.</b>	02-10H-Y5	24-JUN-93	WETADO	STRONTIUM	28.3	MG/KG		. 4		4 10		
, 14	02-10K-93	17- HW-03 TRG	WOACL P	STYRENE	9	UG/KG		<u>ب</u>		-		
	02-JUN-93	24-MM-52	VOACLE	TETRACHLOROETHENS	•	UG/KG		<b>.</b>	7	· <del>-</del>		
	02-JUN-93	24-101-93	METADA	TIMELIUM	72.	MG/KG	,	~	, ,			
	02-JUN-93	17-Jun-93	A I I		e.	MG/KG	,	<b>3</b>	7 -0	A 10	<b>6</b>	
121	12-JUN-93	17-JUN-93	VOACLP	TOTAL YVENES	٥ ٧	02/KG		بر ح	٠	A 1		
TT00001LE (	12-JUN-93	17-JUN-93	VOACLP	TRICKI DOCETHENE	o <b>v</b>	UG/KG		بر د	~ ~	۸ 1		
	02-JUN-93	29-JUN-93 TIC T	TIC BNACLP	Unknown C18H2A	<b>1</b> 20	UG/KG		<b>.</b>	<u>ب</u>	-		
	2-JUN-93	29-JUN-93	TC BRACEP	Unknow-1	350	06/XG		<b>-</b>				
	- 104-93	29-JUN-93	IC BNACLP	Unknown-10	4400	06/KG		<b>~</b> ·				
	-53-53		TIC BUACLP	Unknown-13	256			<b>,</b>				
		29-JUN-93 1	TIC BNACLP	Unknown-14		04/YG	;	<b>-</b> ,		,		
	- JUH-93	29-JUN-93 1	IC BNACLP	Unknow-15	1200			<b>-</b>	1			
	- JUN-93	29-JUN-93	IC BRACLP	Introduct 14	200			-	. 1-			
	-JUN-93		TIC BNACIP	Thursday 18	2:	9/XG		~	•			
	- JUN-93	29-JUN-93 1	TC RNACI D	Inches 10	36	UG/KG	100	-,				
	-50K-93	29-368-93	IC BRACEP	(introduction	3	26/KG	1	~		٠,		
	- JUN-93	29-JUN-93	ט	Inknow. K	25	UG/KG		-				
ш	-JUN-93		ט	Indoor 7	25	UG/KG		2				
	2-701-93	29-JUN-93 TIC'T	5	Unknow-9		UG/KG		<b>-</b> ,	-			
	2-JUN-93	24-JUN-93 TRG,		VANADIIM	2 5	UG/KG		-	•			
	2-JUN-93	17-JUN-93	_	VINYL ACETATE	- °	HG/KG			> 0			
	2- JUN-93	17-JUN-93	-	VINYL CHLORIDE				<b>-</b> :	¬;	<b>-</b>		
	D2-JUN-93	24-JUN-93	SHETCLP	ZINC	- 1.7 - 1.7	26/XG		-	3 9	-		
TT00001LE	02-JUN-93	17-JUN-93	VOACLP	cla-13-bicki nenesnesue		MG/KG		•	<b>-</b> 5	A 17		
	02-JUN-93	29-JUN-93	BHACLP	D-BROMONIPHENY: ETHER	, E			ب ا		<b>-</b>		
	05-JUN-93	17-JUN-93	VOACLP	trans-1-3-01CHIODODOPENE	•	Je/kg		<b>~</b> ⊃:	330	- 4		
<b>.</b>	02-JUN-93	20-JUL-93	TRADS	AMERICIUM-241	17 AA	94/90	*	بر ح	3	<b>-</b>		
	02-JUN-93	18- JUN-93	TRADS	GROSS ALPHA	124		e •	-• (	.0039			
I TOGGETE	02-10N-93	17-JUN-93	TRADS	GROSS BETA	32.80	9/170	- 9	~ (	2.902 A	<u> </u>	25	
TIONIBALE	27-Jul95	30-AUG-93	TRADS	AMERICIUM-241	6.7		49.7	~	V 967.7	2	32	
	24-12-12 12-12-12	17-5EP-93	TRADS	PLUTON1UM-238	1.05	5/17d	300	•	4 4 500 -	Ę		
<b>.</b>	27-JUL-95		TRADS	PLUTOWIUM-239/240	57.1	0/1/4	110	•	85.			
1100109LE	56-70F-72	25-AUG-93	TRADS	URAN1UM-233,-234	589	5/176	174	•	8 8	₽ :	31 21	
	27-301-93	25-AUG-93	TRADS	URAHIUM-235	0222		966	•	¥ 250.	2	29	
	27-JUL-93		TRADS	URANILM-238	. OCEC.		-020-	•	.012 A	₽	3	
	29-JUL-93		TRADS	AKERICIIM-241		9/174	017.		036 A	2	23 23 23	
	29-JUL-93		TRADS	LIRANITUM-233 -234	10.00 10.00		797	٠.	-0042 A	5		
	29-JUL-93	_	TRADS	URANTUM-244	163		77.	-,	.034 A	5	29	
w	29-JUL-93	-	TRADS	(MANICIM-235)	- 100		201.	<b></b>	A 770.	2	29	
	29-JUL-93	09-SEP-93	TRADS	URAHILM-235		2 5	.0472 05:50	-,	.035 A	2	3	
TOOLOGE	29-301-93	25-AUG-93	TRADS	URANIUM-238	6		9420	<b>-,</b> `	A 250.	₽.	29	
	y-30L-ys	U9-SEP-93 REX	TRADS	URAH1UH-238	699		40	•	¥ 560.	₽ (	3	
							2	7	くとう	2	29 ≂	

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Pg 35451

10-MG-93 RG	10	Sample Number Say 11001911E 29	Smpl Date Anal Date ID 2ID Group 29-JUL-93 10-AUG-93 TRG VOACLP	Chemical 1.1.1-TRICHIODETHANE	Result	Unit Error	) and	P.LHT V	VA RNT RI	RNZ RN'S RN4
1, 1, 2, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1,	1,1,2,7,11,000,000,11,1,1,1,1,1,1,1,1,1,1,1,1	٠.	10-AUG-93 TRG		u iu	UO/KG UG/KG	<b>=</b> =	<b>.</b> .	_	
1,	1, -10   1		10-AUG-93 TRG		· co	ne/ke	<b>&gt;</b> =	חוי	_ ~	
77-ANG-99 186 BMACLE 1, 2, 17 CHILL CORDERIZERE 350 UG/AG U 330 V 10 CMACH 37 CMACH	1, 2, 0, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1,	•	10-AUG-93 IRG		ıc i	UG/KG	2	iv >	_	
10-Mile 93 TRG 1 WOLLD 12-DICHORDERIZER 550 UNIVERS 10 MILE 12-DICHORDERIZER 550 UNIV	10-Mile 93 116 (WOLD 12-DICHOROGENERIES 500 UNIZO 10 350 V	7	27-AUG-93 TRG	1.2.4-TPICH OPDERVENE	7	UG/KG	<b>&gt;</b> :	2		
12-01CHILDOREFIELDAR   5   10,700   10   5   7   7   7   7   7   7   7   7   7	12-01CHIODERTENAME   5   16/20CH   12-01CHIODERTE		27-AUG-93 TRG	1,2-DICKLOROBENZENE	350	D6/KG	<b>&gt;</b> =	055		
17-2010110000000000000000000000000000000	10-MC-93 TIG 1 WOACH 1,2-DICHLOROPHENER 5 1 WAYGE 2,2-DICHLOROPHENER 5 1 WAYGE 1,2-DICHLOROPHENER 5 1 WAYGE 1,2-DICHLOROPHEN 5 1 WAYGE		10-AUG-93 TRG	7	5	UG/KG	=			
7-MAC-97 TIG. BIANCLE 7-C-DIGHORDERIZER 550 UG/KG U 5330 V 57-MAC-97 TIG. BIANCLE 7-C-DIGHORDERIZER 550 UG/KG U 5330 V 57-MAC-97 TIG. BIANCLE 2-C-DIGHORDERIZER 550 UG/KG U 5330 V 67-MAC-97 TIG. BIANCLE 2-C-DIGHORDERIZER 550 UG/KG U 57-MAC-97 TIG. BIANCLE 2-C-DIGHORDE	1.5   100,000	•	10-AUG-93 TRG 4	2,	<b>.</b>	UG/KG	<b>,</b>	, iv	_	
7-MOG-93 TEG. BRACLP 2-4-5-TEGLOROBELZENE 350 16,7KG 10 330 V 7-10-10-10-10-10-10-10-10-10-10-10-10-10-	1.	٠.	10-MU4-93 1KG	1, Z-DICHLOROPROPANE	, •^	UG/KG	>			
27-406-39 TRG BIACLP 2,4-5-TICHORGHERIOL 350 UG/KG U 1500 V 1500 UG/KG U 1500 V 157-406-39 TRG BIACLP 2,4-5-TICHORGHERIOL 350 UG/KG U 1500 V 157-406-39 TRG BIACLP 2,4-5-TICHORGHERIOL 350 UG/KG U 1500 V 157-406-39 TRG BIACLP 2,4-5-TICHORGHERIOL 350 UG/KG U 1500 V 157-406-39 TRG BIACLP 2,4-5-TICHORGHERIOL 350 UG/KG U 1500 V 1500 UG/KG U 1500 V 157-406-39 TRG ENACLP 2,4-5-TICHORGHERIOL 350 UG/KG U 1500 V 1500 UG/KG U 1500 UG/KG U 1500 V 1500 UG/KG U 1500 UG/KG U 1500 V 1500 UG/KG U	2 - 4, -0   10   10   10   10   10   10   10	7 7	27. AUG-73 IRU 1	1,3-DICHLOROBENZENE	350	UG/KG	>	330	_	1
27-MG-93 TRG BMCLP 2.4-5-TICHUROPHENOL 350 UG/KG U 1310 V 100 UG/KG U 100 U 1310 V 100 UG/KG U 100 UG/KG U 1310 V 100 UG/KG U 100 UG/KG U 1310 V 1	2 DITION OF LONG OF	, 7	27-411G-03 TPG	1,4-DICHLOROBENZENE	350	UG/KG	2	330		
27-MG-93   186   180.01.   2.4.5 DICHOROPHENOL   350   UG/KG   U   330   V   V   V   V   V   V   V   V   V	27-MG-97 TRG MMCLP 2.4-DIMINOTOLIENE 350 UG/KG U 330 V 150 UG/KG U	7	27-A16-04 TBG	2 / / TICHLOROPHEMOL		UG/KG	2	1600 v	_	
27-MAG-95 TRG BMACE 2, 4-DIMITTOCHEMIC 350 UG/KG U 330 V CARLO-95 TRG BMACE 2, 4-DIMITTOCHEMIC 1700 UG/KG U 1600 V CARLO-95 TRG BMACE 2, 4-DIMITTOCHEMIC 1700 UG/KG U 1330 V CARLO-95 TRG WACE 2, 4-DIMITTOCHEMIC 1700 UG/KG U 1330 V CARLO-95 TRG WACE 2-DIMITTOCHEMIC 1700 UG/KG U 1330 V CARLO-95 TRG WACE 2-DIMITTOCHEMIC 1700 UG/KG U 1330 V CARLO-95 TRG WACE 2-DIMITTOCHEMIC 1700 UG/KG U 1330 V CARLO-95 TRG WACE 2-DIMITTOCHEMIC 1700 UG/KG U 1330 V CARLO-95 TRG WACE 2-DIMITTOCHEMIC 1700 UG/KG U 1330 V CARLO-95 TRG WACE 2-DIMITTOCHEMIC 1700 UG/KG U 1500 V CARLO-95 TRG WACE 2-DIMITTOCHEMIC	The control of the	₹	27-AUG-93 TRG	2 L-51CH OBOBIESO	350	UG/KG	2	330 V		
77-MG-93 TRG	27-Ma-93   184   Marcia   27-Ma-93   185	ਤ੍ਰ	27-AUG-93 TRG	2.4-Directory news	350	UG/KG	<b>3</b> :	230		
77-MG-93 TRG	77-MG-93 TRG - MACLP 2,4-DiMITROTOLURIE 350 UG/FG U 330 V 10-MG-93 TRG - WORLD 2,4-DIMITROTOLURIE 350 UG/FG U 330 V 10-MG-93 TRG - WORLD 2-GUTAMORE 350 UG/FG U 330 V 10-MG-93 TRG - WORLD 2-GUTAMORE 350 UG/FG U 330 V 10-MG-93 TRG - WORLD 2-GUTAMORE 350 UG/FG U 330 V 10-MG-93 TRG - WORLD 2-GUTAMORE 350 UG/FG U 330 V 10-MG-93 TRG - WORLD 2-GUTAMORE 350 UG/FG U 330 V 10-MG-93 TRG - WORLD 2-HITROPHENOL 350 UG/FG U 330 V 10-MG-93 TRG - WORLD 3-HITROPHENOL 350 UG/FG U 330 V 10-MG-93 TRG - WORLD 3-HITROPHENOL 350 UG/FG U 330 V 10-MG-93 TRG - WORLD 3-HITROPHENOL 3-MG-93 TRG - WORLD 3-HITROPHENOL 3-M	₹	27-AUG-93 TRG	2.4-DINITEOPHERO	1700	U6/KG	<b>-</b> :	230	_	
77-MG-93 TRG C BNACLP 2-CHICKNOWNER 550 UG/KG U 5330 V 57-MG-93 TRG C BNACLP 2-EGINGOMAPHINGLE 550 UG/KG U 5330 V 57-MG-93 TRG C BNACLP 2-CHICKNOWNER 550 UG/KG U 530 V 57-MG-93 TRG C BNACLP 2-CHICKNOWNER 550 UG/KG U 530 V 57-MG-93 TRG C BNACLP 2-KETKINGHENGL 550 UG/KG U 530 V 57-MG-93 TRG C BNACLP 2-KETKINGHENGL 550 UG/KG U 530 V 57-MG-93 TRG C BNACLP 2-KITROWHENGL 550	77-MG-93 TRG C BANCEP 2-6-DIMITIONOLEME 350 UG/KG U 330 V 77-MG-93 TRG C BANCEP 2-CHICKOMAPHINALEME 350 UG/KG U 330 V 77-MG-93 TRG C BANCEP 2-CHICKOMAPHINALEME 350 UG/KG U 330 V 77-MG-93 TRG C BANCEP 2-KETRIYLMONTHALEME 350 UG/KG U 330 V 77-MG-93 TRG C BANCEP 2-KETRIYLMONTHALEME 350 UG/KG U 330 V 77-MG-93 TRG C BANCEP 2-KETRIYLMONTHALEME 350 UG/KG U 330 V 77-MG-93 TRG C BANCEP 2-KETRIYLMONTHALEME 350 UG/KG U 330 V 77-MG-93 TRG C BANCEP 2-KETRIYLMONTHALEME 350 UG/KG U 330 V 77-MG-93 TRG C BANCEP 2-KETRIYLMONTHALEME 350 UG/KG U 330 V 77-MG-93 TRG C BANCEP 2-KETRIYLMONTHALEME 350 UG/KG U 330 V 77-MG-93 TRG C BANCEP 2-KETRIYLMONTHALEME 350 UG/KG U 330 V 77-MG-93 TRG C BANCEP 2-KETRIYLDRENOL 350 UG/KG U 330 V 77-MG-93 TRG C BANCEP 2-KETRIYLDRENOL 350 UG/KG U 330 V 77-MG-93 TRG C BANCEP 2-KETRIYLDRENOL 350 UG/KG U 330 V 77-MG-93 TRG C BANCEP 2-KETRIYLDRENOL 350 UG/KG U 330 V 77-MG-93 TRG C BANCEP 2-KETRIYLDRENOL 350 UG/KG U 330 V 77-MG-93 TRG C BANCEP 2-KETRIYLDRENOL 350 UG/KG U 330 V 77-MG-93 TRG C BANCEP 2-KETRIYLDRENOL 350 UG/KG U 330 V 77-MG-93 TRG C BANCEP 2-KETRIYLDRENOL 350 UG/KG U 330 V 77-MG-93 TRG C BANCEP 2-KETRIYLBRENC 350 UG/KG U 330 V 77-MG-93 TRG C BANCEP 2-KETRIYLBRENC 350 UG/KG U 330 V 77-MG-93 TRG C BANCEP 2-KETRIYLBRENC 350 UG/KG U 330 V 77-MG-93 TRG C BANCEP 2-KETRIYLBRENC 350 UG/KG U 330 V 77-MG-93 TRG C BANCEP 2-KETRIYLBRENC 350 UG/KG U 330 V 77-MG-93 TRG C BANCEP 2-KETRIYLBRENC 350 UG/KG U 330 V 77-MG-93 TRG C BANCEP 3-KETRIYLBRENC 350 UG/KG U 330 V 77-MG-93 TRG C BANCEP 3-KETRIYLBRENC 350 UG/KG U 330 V 77-MG-93 TRG C BANCEP 3-KETRIYLBRENC 350 UG/KG U 330 V 77-MG-93 TRG C BANCEP 3-KETRIYLBRENC 350 UG/KG U 330 V 77-MG-93 TRG C BANCEP 3-KETRIYLBRENC 350 UG/KG U 330 V 77-MG-93 TRG C BANCEP 3-KETRIYLBRENC 350 UG/KG U 330 V 77-MG-93 TRG C BANCEP 3-KETRIYLBRENC 350 UG/KG U 330 V 77-MG-93 TRG C BANCEP 3-KETRIYLBRENC 350 UG/KG U 330 V 77-MG-93 TRG C BANCEP 3-KETRIYLBRENC 350 UG/KG U 330 V 77-MG-93 TRG C BANCEP 3-KETRIYLBRENC 350 UG/KG U 330 V 77-MG-93 TRG C BANCEP 3-KETRIYLBRENC 350 UG/KG U 330 V 77-MG	₹	27-AUG-93 TRG	2.4-DINITEGICALE	250	US/KG	<b>&gt;</b> :	209	_	
10-Mile-93   186   C.   18MCC    2-681/MORE    150	10-Mag-93 TRG C. WORCEP 2-ENTANONE 110 UG/KG U 1330 V 27-Mag-93 TRG C. BIAACLP 2-CHICKOMPETALENE 1350 UG/KG U 1350 V 27-Mag-93 TRG C. BIAACLP 2-CHICKOMPETALENE 1350 UG/KG U 1350 V 27-Mag-93 TRG C. BIAACLP 2-CHICKOMPETALENE 1350 UG/KG U 1350 V 27-Mag-93 TRG C. BIAACLP 2-HICKOMPETALENE 1350 UG/KG U 1350 V 27-Mag-93 TRG C. BIAACLP 2-HICKOMPETALENE 1350 UG/KG U 1350 V 27-Mag-93 TRG C. BIAACLP 2-HICKOMPETALENE 1300 UG/KG U 1350 V 27-Mag-93 TRG C. BIAACLP 2-HICKOMPETALENE 1700 UG/KG U 1350 V 27-Mag-93 TRG C. BIAACLP 2-HICKOMPETALENE 1700 UG/KG U 1350 V 27-Mag-93 TRG C. BIAACLP 2-HICKOMPETALENE 1700 UG/KG U 1350 V 27-Mag-93 TRG C. BIAACLP 2-HICKOMPETALENE 1700 UG/KG U 1350 V 27-Mag-93 TRG C. BIAACLP 2-HICKOMPETALENE 1700 UG/KG U 1350 V 27-Mag-93 TRG C. BIAACLP 2-HICKOMPETALENE 1700 UG/KG U 1350 V 27-Mag-93 TRG C. BIAACLP 2-HICKOMPETALENE 1700 UG/KG U 1350 V 27-Mag-93 TRG C. BIAACLP 2-HICKOMPETALENE 1700 UG/KG U 1350 V 27-Mag-93 TRG C. BIAACLP 2-HICKOMPETALENE 1700 UG/KG U 1350 V 27-Mag-93 TRG C. BIAACLP 2-HICKOMPETALENE 1700 UG/KG U 1350 V 27-Mag-93 TRG C. BIAACLP 2-HICKOMPETALENE 1700 UG/KG U 1350 V 27-Mag-93 TRG C. BIAACLP 2-HICKOMPETALENE 1700 UG/KG U 1350 V 27-Mag-93 TRG C. BIAACLP 2-HICKOMPETALENE 1700 UG/KG U 1350 V 1000 V	훅	27-AUG-93 TRG	2.6-DINITEDIA	250	UG/KG	<b>&gt;</b> :	330	_	
17-140-93   146 C   6   6   6   7   7   7   7   7   7   7	77-MLG-93 TRG C. BIANCEP 2-CHICOGNOPHTNALENE 310 UG/KG U 330 V 77-MLG-93 TRG C. BIANCEP 2-CHICOGNOPHTNALENE 350 UG/KG U 330 V 77-MLG-93 TRG C. BIANCEP 2-KITHULHORITALENE 350 UG/KG U 330 V 77-MLG-93 TRG C. BIANCEP 2-KITHULHORITALENE 350 UG/KG U 330 V 77-MLG-93 TRG C. BIANCEP 2-KITHULHORITALENE 350 UG/KG U 330 V 77-MLG-93 TRG C. BIANCEP 2-KITHULHORITALENE 350 UG/KG U 330 V 77-MLG-93 TRG C. BIANCEP 2-KITHULHORITALENE 350 UG/KG U 330 V 77-MLG-93 TRG C. BIANCEP 2-KITHULHORITALENE 350 UG/KG U 16500 V 77-MLG-93 TRG C. BIANCEP 4-CHICOGO-YERTHULHORITOL 1700 UG/KG U 16500 V 77-MLG-93 TRG C. BIANCEP 4-CHICOGO-YERTHULHORITOL 1700 UG/KG U 16500 V 77-MLG-93 TRG C. BIANCEP 4-CHICOGO-YERTHULHORITOL 1700 UG/KG U 16500 V 77-MLG-93 TRG C. BIANCEP 4-CHICOGO-YERTHULHORITOL 1700 UG/KG U 16500 V 77-MLG-93 TRG C. BIANCEP 4-CHICOGO-YERTHULHORITOL 1700 UG/KG U 16500 V 77-MLG-93 TRG C. BIANCEP 4-CHICOGO-YERTHULHORITOL 1700 UG/KG U 16500 V 77-MLG-93 TRG C. BIANCEP 4-CHICOGO-YERTHULHORITOL 1700 UG/KG U 16500 V 77-MLG-93 TRG C. BIANCEP 4-KITHULHORITOL 1700 UG/KG U 16500 V 77-MLG-93 TRG C. BIANCEP 4-KITHULHORITOL 1700 UG/KG U 16500 V 77-MLG-93 TRG C. BIANCEP 4-KITHULHORITOL 1700 UG/KG U 16500 V 77-MLG-93 TRG C. BIANCEP 4-KITHULHORITOL 1700 UG/KG U 16500 V 77-MLG-93 TRG C. BIANCEP 4-KITHULHORITOL 1700 UG/KG U 16500 V 77-MLG-93 TRG C. BIANCEP 4-KITHULHORITOL 1700 UG/KG U 16500 V 77-MLG-93 TRG C. BIANCEP 4-KITHULHORITOL 1700 UG/KG U 16500 V 77-MLG-93 TRG C. BIANCEP 4-KITHULHORITOL 1700 UG/KG U 16500 V 77-MLG-93 TRG C. BIANCEP 4-KITHULHORITOL 1700 UG/KG U 16500 V 77-MLG-93 TRG C. BIANCEP 4-KITHULHORITOL 1700 UG/KG U 16500 V 77-MLG-93 TRG C. BIANCEP 4-KITHULHORITOL 1700 UG/KG U 16500 V 77-MLG-93 TRG C. BIANCEP 4-KITHULHORITOL 1700 UG/KG U 16500 V 77-MLG-93 TRG C. BIANCEP 4-KITHULHORITOL 1700 UG/KG U 16500 V 77-MLG-93 TRG C. BIANCEP 4-KITHULHORITOL 1700 UG/KG U 16500 V 77-MLG-93 TRG C. BIANCEP 4-KITHULHORITOLUCANTHURHORITOLUCANTHURHORITOLUCANTHURHORITOLUCANTHURHORITOLUCANTHURHORITOLUCANTHURHORITOLUCANTHURHORITOLUCANTHURHORITOLUCANTHURHORITOLUCANTH	¥	10-AUG-93 TRG t	2-Ritande	220	UG/KG	9	330		
77-MIG-93 TRG C. BINCLP 2-PEXAMONE 11	77-MG-93 TRG 1-MOCLP 2-PEXAMONE 11 10-MG-93 TRG 1-MG-93 TRG 1-MG-9	¥	27-AUG-93 TRG C	2-CHI ODOMADHTUAI ENE		UG/KG	= :	2		
10-AUG-93 TRG 1 - WOACLP 2 - WEINTLANDFITHLENE 350 UG/NG UG/	10-MG-93 TRG 1: WOLCEP 2-WEINTHALENE 350 UG/KG U 330 V 27-MG-93 TRG 2: MINCEP 2-WEINTHALENE 350 UG/KG U 330 V 27-MG-93 TRG 2: MINCEP 2-WEINTHALENE 350 UG/KG U 330 V 27-MG-93 TRG 2: MINCEP 2-WITROWHILLINE 1700 UG/KG U 1600 V 27-MG-93 TRG 4: MINCEP 2-WITROWHILLINE 1700 UG/KG U 1600 V 27-MG-93 TRG 4: MINCEP 2-WITROWHILLINE 1700 UG/KG U 1600 V 27-MG-93 TRG 4: MINCEP 2-WITROWHILLINE 1700 UG/KG U 1600 V 27-MG-93 TRG 4: MINCEP 2-WITROWHILLINE 1700 UG/KG U 1600 V 27-MG-93 TRG 4: WORCEP 4-WITRU-2-WEINTHALMOME 11 UG/KG U 1600 V 27-MG-93 TRG 4: WORCEP 4-WITRU-2-WEINTHALMOME 11 UG/KG U 1600 V 27-MG-93 TRG 4: WORCEP 4-WITRU-2-WEINTHALMOME 11 UG/KG U 1600 V 27-MG-93 TRG 4: WORCEP 4-WITRU-2-WEINTHALMOME 11 UG/KG U 1600 V 27-MG-93 TRG 4: WORCEP 4-WITRU-2-WEINTHALMOME 11 UG/KG U 1600 V	亨	27-AUG-93 TRG 1.	2-CHI OROPHEND	350	UG/KG	<b>&gt;</b> :	330		
77-MG-93 TRG 0- BMACLP 2-WETNYLMAPHYMLENE 350 UG/NG U 330 V 27-MG-93 TRG 0- BMACLP 2-WETNYLMAPHYMLENE 350 UG/NG U 330 V 27-MG-93 TRG 0- BMACLP 2-WITROPHENOL 350 UG/NG U 330 V 27-MG-93 TRG 0- BMACLP 3-WITROPHENOL 350 UG/NG U 1600 V 1600 V 27-MG-93 TRG 0- BMACLP 3-WITROPHENOL 350 UG/NG U 1600 V 27-MG-93 TRG 0- BMACLP 4-CHLORO-3-WETNYLPHENOL 350 UG/NG U 330 V 27-MG-93 TRG 0- BMACLP 4-CHLORO-3-WETNYLPHENOL 350 UG/NG U 330 V 27-MG-93 TRG 0- BMACLP 4-WETNYL-2-PEWTNAMIL NE 350 UG/NG U 330 V 27-MG-93 TRG 0- BMACLP 4-WETNYL-2-PEWTNAMIL NE 350 UG/NG U 330 V 330 V 370 UG/NG U 330 UG/NG	77-AUG-93 TRG 0. BIACLP 2-WETNYLIMENT 350 UG/NG U 330 V 27-AUG-93 TRG 0. BIACLP 2-WETNYLIMENT 1700 UG/NG U 330 V 27-AUG-93 TRG 0. BIACLP 2-WETNYLIMEN 1700 UG/NG U 330 V 27-AUG-93 TRG 0. BIACLP 2-WETNYLIMEN 1700 UG/NG U 330 V 27-AUG-93 TRG 0. BIACLP 4-C-RUINOPALLIME 1700 UG/NG U 330 V 27-AUG-93 TRG 0. BIACLP 4-C-RUINOPALLIME 1700 UG/NG U 330 V 27-AUG-93 TRG 0. BIACLP 4-C-RUINOPALLIME 1700 UG/NG U 330 V 27-AUG-93 TRG 0. BIACLP 4-C-RUINOPALLIME 1700 UG/NG U 330 V 27-AUG-93 TRG 0. BIACLP 4-C-RUINOPALLIME 1700 UG/NG U 330 V 27-AUG-93 TRG 0. BIACLP 4-C-RUINOPALLIME 1700 UG/NG U 330 V 27-AUG-93 TRG 0. BIACLP 4-WETNYLPHENOL 350 UG/NG U 330 V 27-AUG-93 TRG 0. BIACLP 4-WETNYLPHENOL 350 UG/NG U 330 V 27-AUG-93 TRG 0. BIACLP 4-WETNYLPHENOL 350 UG/NG U 330 V 27-AUG-93 TRG 0. BIACLP 4-WETNYLPHENOL 350 UG/NG U 330 V 27-AUG-93 TRG 0. BIACLP 4-WETNYLPHENOL 350 UG/NG U 330 V 27-AUG-93 TRG 0. BIACLP 4-WETNYLPHENOL 350 UG/NG U 330 V 27-AUG-93 TRG 0. BIACLP 4-WETNYLPHENOL 350 UG/NG U 330 V 27-AUG-93 TRG 0. BIACLP A-WETNYLPHENOL 350 UG/NG U 330 V 27-AUG-93 TRG 0. BIACLP A-WETNYLPHENOL 350 UG/NG U 330 V 27-AUG-93 TRG 0. BIACLP A-WETNYLPHENOL 350 UG/NG U 330 V 27-AUG-93 TRG 0. BIACLP A-WETNYLPHENOL 350 UG/NG U 330 V 30 V 30 V 30 V 30 V 30 V 30 V 3	흑	10-AUG-93 TRG .	2-HEXANONE	-	06/K6	<b>&gt;</b> :	230	,	
77-ALG-93 TRG C. BHACLP 2-WEINTLPHENOL 350 UG/KG U 330 V 330 V 37-ALG-93 TRG C. BHACLP 2-NITROMNILINE 1700 UG/KG U 330 V 330 V 37-ALG-93 TRG C. BHACLP 3-NITROMNILINE 1700 UG/KG U 660 V 1660 V 37-ALG-93 TRG C. BHACLP 4-CILORO-3-WEINTLPHENOL 370 UG/KG U 330 V 330 V 37-ALG-93 TRG C. BHACLP 4-CILORO-3-WEINTLPHENOL 370 UG/KG U 330 V 330 V 37-ALG-93 TRG C. BHACLP 4-CILORO-3-WEINTLPHENOL 370 UG/KG U 330 V 330 V 37-ALG-93 TRG C. BHACLP 4-WEINTLPHENOL 370 UG/KG U 330 V 330 V 37-ALG-93 TRG C. BHACLP 4-WEINTLPHENOL 350 UG/KG U 330 V 37-ALG-93 TRG C. BHACLP 4-WEINTLPHENOL 350 UG/KG U 330 V 37-ALG-93 TRG C. BHACLP 4-WEINTLPHENOL 350 UG/KG U 330 V 37-ALG-93 TRG C. BHACLP A-WEINTLPHENOL 350 UG/KG U 330 V 37-ALG-93 TRG C. BHACLP A-WEINTLPHENOL 350 UG/KG U 330 V 37-ALG-93 TRG C. BHACLP A-WEINTLPHENOL 350 UG/KG U 330 V 37-ALG-93 TRG C. BHACLP A-WEINTLPHENOL 350 UG/KG U 330 V 37-ALG-93 TRG C. BHACLP A-WEINTLPHENOL 350 UG/KG U 330 V 37-ALG-93 TRG C. BHACLP A-WEINTLPHENOL 350 UG/KG U 330 V 37-ALG-93 TRG C. BHACLP A-WEINTLPHENOL 350 UG/KG U 330 V 37-ALG-93 TRG C. BHACLP A-WEINTLPHENOL 350 UG/KG U 330 V 37-ALG-93 TRG C. BHACLP A-WEINTLPHENOL 350 UG/KG U 330 V 37-ALG-93 TRG C. BHACLP B-WEINTLPHENOL 350 UG/KG U 330 V 37-ALG-93 TRG C. BHACLP B-WEINTLPHENOL 350 UG/KG U 330 V 37-ALG-93 TRG C. BHACLP B-WEINTLPHENOL 350 UG/KG U 330 V 37-ALG-93 TRG C. BHACLP B-WEINTLPHENOL 350 UG/KG U 330 V 37-ALG-93 TRG C. BHACLP B-WEINTLPHENOL 350 UG/KG U 330 V 37-ALG-93 TRG C. BHACLP B-WEINTLPHENOL 350 UG/KG U 330 V 37-ALG-93 TRG C. BHACLP B-WEINTLPHENOL 350 UG/KG U 330 V 37-ALG-93 TRG C. BHACLP B-WEINTLPHENOL 350 UG/KG U 330 V 37-ALG-93 TRG C. BHACLP B-WEINTLPHENOL 350 UG/KG U 330 V 37-ALG-93 TRG C. BHACLP B-WEINTLPHENOL 350 UG/KG U 330 V 37-ALG-93 TRG C. BHACLP B-WEINTLPHENOL 350 UG/KG U 330 V 37-ALG-93 TRG C. BHACLP B-WEINTLPHENOL 350 UG/KG U 330 V 37-ALG-93 TRG C. BHACLP B-WEINTLPHENOL 350 UG/KG U 330 V 37-ALG-93 TRG C. BHACLP B-WEINTLPHENOL 350 UG/KG U 330 V 37-ALG-93 TRG C. BHACLP B-WEINTLPHENOL 350 UG/KG U 330 V 37-ALG-93 TRG C. BHACLP C. BHACLP C.	77-ALG-93 TRG C BNACLP 2-WEINTLPHENOL 350 UG/NG U 330 V 27-ALG-93 TRG C BNACLP 2-WITROWNILLINE 1700 UG/NG U 1600 V 27-ALG-93 TRG C BNACLP 2-WITROWNILLINE 1700 UG/NG U 1600 V 27-ALG-93 TRG C BNACLP 3-3-1-DIGHURORENZIDINE 700 UG/NG U 1600 V 27-ALG-93 TRG C BNACLP 4-0-INTROM-LEN 700 UG/NG U 1600 V 27-ALG-93 TRG C BNACLP 4-0-INTROM-LEN 700 UG/NG U 1600 V 27-ALG-93 TRG C BNACLP 4-CHURO-3-HETHYLPHENOL 350 UG/NG U 1600 V 27-ALG-93 TRG C BNACLP 4-CHURO-9-HETHYLPHENOL 350 UG/NG U 1600 V 27-ALG-93 TRG C BNACLP 4-WEINTL-2-PENT/ANME 13 TRG C BNACLP 4-WEINTL-3-PENT/ANME 13 TRG C BNACLP 4-WEINTL-3-PENT/ANME 13 TRG C BNACLP ACKNAPHTWILENE 13 TRG C	닄	27-AUG-93 TRG O.	2-METHYL MAPHTHAT FUE	450	U6/K6	<b>&gt;</b> :	2		
77-ALG-93 TRG C. BHACLP 2-NITROWNILLINE 1700 UG/KG U 1600 V 27-ALG-93 TRG C. BHACLP 2-NITROWNILLINE 1700 UG/KG U 1600 V 330 V 27-ALG-93 TRG C. BHACLP 2-NITROWNILLINE 1700 UG/KG U 1600 V 330 V 27-ALG-93 TRG C. BHACLP 4-6-DINITROPLEM 1700 UG/KG U 1600 V 1600 V 27-ALG-93 TRG C. BHACLP 4-6-DINITROPLEM 1700 UG/KG U 1600 V 27-ALG-93 TRG C. BHACLP 4-CHLORO-HENT, PRENT ETH 350 UG/KG U 330 V 27-ALG-93 TRG C. BHACLP 4-CHLORO-HENT, PRENT ETH 350 UG/KG U 330 V 27-ALG-93 TRG C. BHACLP 4-KETHYL-EPONTANONE 11 UG/KG U 330 V 27-ALG-93 TRG C. BHACLP 4-KETHYL-EPONTANONE 1700 UG/KG U 330 V 27-ALG-93 TRG C. BHACLP 4-KETHYL-EPONTANONE 1700 UG/KG U 330 V 27-ALG-93 TRG C. BHACLP A-KETHYL-EPONTANONE 350 UG/KG U 330 V 27-ALG-93 TRG C. BHACLP A-KETHYL-EPONTANONE 350 UG/KG U 330 V 27-ALG-93 TRG C. BHACLP A-KETHYL-EPONTANONE 350 UG/KG U 330 V 27-ALG-93 TRG C. BHACLP A-KETHYL-EPONTANONE 350 UG/KG U 330 V 27-ALG-93 TRG C. BHACLP A-KETHYL-EPONTANONE 350 UG/KG U 330 V 27-ALG-93 TRG C. BHACLP A-KETHYL-EPONTANONE 350 UG/KG U 330 V 27-ALG-93 TRG C. BHACLP A-KETHYL-EPONTANONE 350 UG/KG U 330 V 27-ALG-93 TRG C. BHACLP A-KETHYL-EPONTANONE 350 UG/KG U 330 V 27-ALG-93 TRG C. BHACLP A-KETHYL-EPONTANONE 350 UG/KG U 330 V 37-ALG-93 TRG C. BHACLP A-KETHYL-EPONTANONE 350 UG/KG U 330 V 37-ALG-93 TRG C. BHACLP A-KETHYL-EPONTANONE 350 UG/KG U 330 V 37-ALG-93 TRG C. BHACLP A-KETHYL-EPONTANONE 350 UG/KG U 330 V 37-ALG-93 TRG C. BHACLP A-KETHYL-EPONTANONE 350 UG/KG U 330 V 37-ALG-93 TRG C. BHACLP CA-ALG-93 TRG CA-ALG	77-AUG-93 TRG C. BHACLP 2-WITROWNILINE 1700 UG/KG U 1600 V 27-AUG-93 TRG C. BHACLP 2-WITROWNILINE 1700 UG/KG U 1600 V 330 V 370 V 370-93 TRG C. BHACLP 4-CHICROCHENITOLINE 1700 UG/KG U 1600 V 1600 V 27-AUG-93 TRG C. BHACLP 4-CHICROCHENITOLINE 1700 UG/KG U 1600 V 370-AUG-93 TRG C. BHACLP 4-CHICROCHENITINE 1700 UG/KG U 1600 V 370 V	Ę	27-AUG-93 TRG (	2-WEINYLPHENOL	250	110 /KG	<b>&gt;</b> :	230		1
72-ALG-93 TRG # BNACLP 2-HTROPHENOL 350 UG/KG U 3300 V 27-ALG-93 TRG # BNACLP 3, 3-0 TGICHORGHIZIDINE 700 UG/KG U 1600 V 27-ALG-93 TRG # BNACLP 4-6-DIMITINE 700 UG/KG U 1600 V 27-ALG-93 TRG # BNACLP 4-6-DIMITINE 700 UG/KG U 1600 V 27-ALG-93 TRG # BNACLP 4-CHLOROPHENYL PRENYL ETH 350 UG/KG U 330 V 27-ALG-93 TRG # BNACLP 4-CHLOROPHENYL PRENYL ETH 350 UG/KG U 330 V 27-ALG-93 TRG # BNACLP 4-KETHYLPHENOL 350 UG/KG U 1600 V 27-ALG-93 TRG # BNACLP 4-KETHYLPHENOL 1700 UG/KG U 1600 V 27-ALG-93 TRG # BNACLP 4-KETHYLPHENOL 1700 UG/KG U 1600 V 27-ALG-93 TRG # BNACLP A-KETHYLPHENOL 1700 UG/KG U 1600 V 27-ALG-93 TRG # BNACLP A-KETHYLPHENOL 1700 UG/KG U 1600 V	72-Aug-93 TRG f. BNACLP 2-HTROPHENOL 350 UG/KG U 3300 V 27-Aug-93 TRG f. BNACLP 3-3-OTGHORDSHAZIDINE 700 UG/KG U 1600 V 27-Aug-93 TRG f. BNACLP 4-6-DIMITO-2-HETHYLPHENOL 350 UG/KG U 1600 V 27-Aug-93 TRG f. BNACLP 4-CHLORO-3-HETHYLPHENOL 350 UG/KG U 330 V 27-Aug-93 TRG f. BNACLP 4-CHLORO-HETHYL ETH 350 UG/KG U 330 V 27-Aug-93 TRG f. BNACLP 4-CHLORO-HETHYL ETH 350 UG/KG U 330 V 27-Aug-93 TRG f. BNACLP 4-HTHYLPHENOL 1700 UG/KG U 1600 V 27-Aug-93 TRG f. BNACLP 4-HTHYLPHENOL 1700 UG/KG U 1600 V 27-Aug-93 TRG f. BNACLP 4-HTHYLPHENOL 1700 UG/KG U 1600 V 27-Aug-93 TRG f. BNACLP 4-HTHYLPHENOL 1700 UG/KG U 1600 V 27-Aug-93 TRG f. BNACLP A-HTHOPHENOL 1700 UG/KG U 1600 V 27-Aug-93 TRG f. BNACLP A-HTHOPHENOL 1700 UG/KG U 1600 V 27-Aug-93 TRG f. BNACLP A-HTHOPHENOL 1700 UG/KG U 1600 V 27-Aug-93 TRG f. BNACLP A-HTHOPHENOL 1700 UG/KG U 1700	Ę	27-AUG-93 TRG C	2-NITROANILINE	1700	110 /KG	<b>&gt;</b> :	250		
727-AUG-93 TRG 7 BRACLP 3.37-DICHLOROBERAZIDINE 700 UG/KG U 560 V 57-AUG-93 TRG 7 BRACLP 4.4-DICHLOROBERAZIDINE 700 UG/KG U 1600 V 57-AUG-93 TRG 7 BRACLP 4.4-DIMITRA-2-HETNIT-DRENO 1700 UG/KG U 1600 V 57-AUG-93 TRG 7 BRACLP 4.4-DIMITRA-2-HETNIT-DRENO 1700 UG/KG U 1600 V 57-AUG-93 TRG 7 BRACLP 4.4-DIMITRA-2-HETNIT-DRENO 1700 UG/KG U 1700 V 57-AUG-93 TRG 7 BRACLP 4.HITRORHENI ME 1700 UG/KG U 1700 V 57-AUG-93 TRG 7 BRACLP 4.HITRORHENI ME 1700 UG/KG U 1700 V 57-AUG-93 TRG 7 BRACLP 4.HITRORHENI ME 1700 UG/KG U 1700 V 57-AUG-93 TRG 7 BRACLP ACENAPHTHENE 350 UG/KG U 1700 V 330 V 57-AUG-93 TRG 7 BRACLP ACENAPHTHENE 350 UG/KG U 1700 V 330 V 57-AUG-93 TRG 7 BRACLP ACENAPHTHENE 350 UG/KG U 1700 V 330 V 10-AUG-93 TRG 7 BRACLP ALLHINUM 43-60 UG/KG U 1700 V 330 V 10-AUG-93 TRG 7 BRACLP ALLHINUM 43-60 UG/KG U 1700	72-Aug-93 TRG ft BNACLP 3,3'-01CRLOROBENZIDINE 700 UG/KG U 650 V 70 CALGE-93 TRG ft BNACLP 4-6 DIMITRAGE 1700 UG/KG U 1600 V 160	<b>5</b> :	27-AUG-93 TRG 4	2-HITROPHENOL	350	MS/KG	<b>&gt;</b> =			
727-AUG-93 TRG \$ BMACLP	727-ALG-93 FRG 6 BHACLP 4,4-01MITINE 1700 UG/KG U 1600 V 27-ALG-93 FRG 6 BHACLP 4,6-01MITRO-Z-HETHYLPHENO 1700 UG/KG U 1600 V 27-ALG-93 FRG C BHACLP 4-CHLORO-MILINE 350 UG/KG U 330 V 330	3	27-AUG-93 TRG if . I	3,3'-DICHLOROBENZIDINE	200	15/20	<b>&gt; =</b>	200	_	
27-ALG-93 TRG ( BWACLP	27-ALG-93 TRG ( BWACLP	<b>Ş</b> :	27-AUG-93 TRG ( 1	3-NITROANILINE	1700	JG/KG	<b>7</b>	2 5		
727-AUG-93 TRG - BNACLP	27-ALG-93 TRG BLACLP 4-CRLORO-3-NETHYLPHENOL 350 LIG/KG U 330 V 27-ALG-93 TRG BLACLP 4-CRLOROPHENYL ETH 350 LIG/KG U 330 V 27-ALG-93 TRG BLACLP 4-CRLOROPHENYL ETH 350 LIG/KG U 330 V 27-ALG-93 TRG BLACLP 4-KETHYL-2-PENYANOME 11 LIG/KG U 330 V 27-ALG-93 TRG BLACLP 4-KETHYL-2-PENYANOME 150 LIG/KG U 330 V 27-ALG-93 TRG BLACLP 4-KETHYL-ENOL 1700 LIG/KG U 330 V 27-ALG-93 TRG BLACLP 4-KETHYLPHENOL 1700 LIG/KG U 330 V 1600 V 27-ALG-93 TRG BLACLP A-KENAPHTHENE 350 LIG/KG U 330 V 1600 V 27-ALG-93 TRG BLACLP A-KENAPHTHENE 350 LIG/KG U 330 V 1600 V 27-ALG-93 TRG BLACLP A-KENAPHTHENE 350 LIG/KG U 330 V 1600 V 27-ALG-93 TRG BLACLP A-KENAPHTHENE 350 LIG/KG U 330 V 1600 V 27-ALG-93 TRG BLACLP A-KENAPHTHENE 350 LIG/KG U 330 V 1600 V 27-ALG-93 TRG BLACLP A-KENAPHTHENE 350 LIG/KG U 330 V 1600 V 27-ALG-93 TRG BLACLP A-KENAPHTHENE 350 LIG/KG U 330 V 1600 V 27-ALG-93 TRG BLACLP A-KENAPHTHENE 350 LIG/KG U 330 V 1600 V	5	27-AUG-93 TRG (C	4,6-DINITRO-2-HETHYLPHEND	1700	US/KG	<b>&gt;</b> =			
27-AUG-93 TRG BRACLP	27-AUG-93 TRG BHACLP	<b>5</b> :	27-AUG-93 TRG 1- 1	4-CHLORO-3-HETNYLPHENOL	350	De/Ke	<b>;</b>			
27-AUG-93 TRG BIACLP 4-CHLOROPHENTL PHENT ETH 350 UG/KG U 330 V 27-AUG-93 TRG BIACLP 4-CHLOROPHENTL PHENT ETH 350 UG/KG U 10 V 330 V 27-AUG-93 TRG BIACLP 4-NETHTLIPHEN	10-7446-93 TRG 11-4-CHLOROPHENTL PRENTL ETH 350 UG/KG U 330 V 27-A446-93 TRG 11-44-WETHTL-PENTANNE TH 10-446-93 TRG 11-4-14-WETHTL-PENTANNE TH 10-446-93 TRG 11-4-WACLP 4-WETHTL-PENTANNE TH 10-446-93 TRG 11-4-WITCHENOL 1700 UG/KG U 1600 V 27-A446-93 TRG 11-4-WITCHENOL 1700 UG/KG U 1600 V 27-A446-93 TRG 11-4-WITCHENOL 1700 UG/KG U 1600 V 27-A446-93 TRG 11-4-WITCHENOL 1700 UG/KG U 1700 VG/KG U 1	3	27-AUG-93 TRG	4-CHLOROANILINE	350	Uarka	=	330		
10	27-AUG-93 FRG3 BNACLP 4-NETHYL-2-PENTAMONE 11 UG/KG U 330 V 27-AUG-93 FRG3 BNACLP 4-NETHYL-1-PENTAMONE 11 UG/KG U 330 V 27-AUG-93 FRG3 BNACLP 4-NETHYL-1-PENTAMONE 1700 UG/KG U 1600 V 27-AUG-93 FRG BNACLP ACENAPHTHENE 350 UG/KG U 330 V 27-AUG-93 FRG BNACLP ACENAPHTHENE 350 UG/KG U 330 V 27-AUG-93 FRG SHETCLP ALLMINUM 4540 UG/KG U 330 V 27-AUG-93 FRG SHETCLP ANTHRACENE 350 UG/KG U 330 V 27-AUG-93 FRG SHETCLP ANTHRACENE 350 UG/KG U 330 V 27-AUG-93 FRG SHETCLP ANTHRACENE 350 UG/KG U 330 V 2.0 UG/KG U 330 V 330 V 2.0 UG/KG U 330 V 330 V 3.0 UG/KG U 330 V 330 V 3.0 UG/KG U 330 V 330 V 3.0 UG/KG U 330 V 3.		40 1150 07 116	4-CHLOROPHENYL PHENYL ETH	350	UG/KG	- =			
27-AUG-93 TRG BHACLP - 4-NETHTLPHENOL	27-AUG-93 TRG BRACLP 4-NETHYLPHENOL 350 UG/KG U 1600 V 27-AUG-93 TRG BRACLP 4-NITROANILINE 1700 UG/KG U 1600 V 27-AUG-93 TRG BRACLP ACENDRICH 257-AUG-93 TRG BRACLP ACENDRICH 350 UG/KG U 1600 V 27-AUG-93 TRG BRACLP ACENDRICH 350 UG/KG U 330 V 27-AUG-93 TRG BRACLP ACENDRICH 350 UG/KG U 330 V 25-AUG-93 TRG SHETCLP ALLINIAM 43-60 HG/KG U 330 V 27-AUG-93 TRG SHETCLP ALLINIAM 43-60 HG/KG U 330 V 27-AUG-93 TRG SHETCLP ALLINIAM 43-60 HG/KG U 172 JA 12 JA	7	10-AUG-95 1RG R	4-HETHYL-2-PENTANONE	11	UQ/KG	> 5			
27-AUG-93 TRG " BMACLP	27-AUG-93 TRG " BIACLP 4-NITROPHENOL 1700 UG/KG U 1600 V 27-AUG-93 TRG " BIACLP 4-NITROPHENOL 1700 UG/KG U 1600 V 27-AUG-93 TRG " BIACLP ACENAPHTHENE 350 UG/KG U 330 V 27-AUG-93 TRG " BIACLP ACETONE 36 UG/KG U 330 V 27-AUG-93 TRG BIACLP ALMINIM 4360 UG/KG U 330 V 27-AUG-93 TRG BIACLP ALMINIM 4360 UG/KG U 330 V 27-AUG-93 TRG BIACLP ANTHRACENE 350 UG/KG U 12 JA 12 J	7	27 - AUG-95 1RG	4-HETHYLPHENOL	350	UG/KG	=	2 2 2		
27-AUG-93 TRG " BNACLP 4-NITROPHENOL 1700 UG/KG U 330 V 27-AUG-93 TRG " BNACLP ACENAPHTHENE 350 UG/KG U 330 V 330	22-AUG-93 TRG BMACLP		Z/-AUG-93 TRG L.	4-WITROANILINE -	1700	UG/KG	2 2		!	
27-AUG-93 TRG BNACLP ACENAPHTHENE 350 UG/KG U 330 V 27-AUG-93 TRG BNACLP ACENAPHTHENE 350 UG/KG U 330 V 27-AUG-93 TRG VOACLP ACENAPHTHYLENE 350 UG/KG U 330 V 27-AUG-93 TRG SHETCLP ALUMINUM 4360 UG/KG U 12 JA 49 40 V 27-AUG-93 TRG SHETCLP ANTHRACENE 350 UG/KG U 12 JA 12 JA 12 SEP-93 TRG SHETCLP ANTHRACENE 3.5 HG/KG U 12 JA	22-AUG-93 TRG BNACLP ACENAPHTHENE 350 UG/KG U 330 V 27-AUG-93 TRG BNACLP ACENAPHTHENE 350 UG/KG U 330 V 330 V 27-AUG-93 TRG BNACLP ALLWINUM 4360 UG/KG U 10 JA 49 LG/KG U 12-AUG-93 TRG SWETCLP ANTHRONY 5-4 MG/KG U 12-AUG-93 TRG SWETCLP ANTHRONY 5-4 MG/KG U 12-AUG-93 TRG SWETCLP ANTHRONY 5-4 MG/KG U 12-AUG-93 TRG SWETCLP ANTHRONY 79-4 MG/KG U 12-AUG-93 TRG SWETCLP ANTHRONY 19000 UG/KG AJ 2-0 V 12-AUG-93 TRG SWETCLP BERZENE 5-4 MG/KG U 15-AUG-93 TRG BNACLP BERZENE 5-4 UG/KG J 3330 A 27-AUG-93 TRG BNACLP BERZOGAPYRENE 47 UG/KG J 3330 A 27-AUG-93 TRG BNACLP BERZOGAPYRENE 47 UG/KG J 3330 A 27-AUG-93 TRG BNACLP BERZOGAPYRENE 350 UG/KG J 3330 V 27-AUG-93 TRG BNACLP BERZOGAPYRENE 350 UG/KG J 3330 V	7	27-AUG-93 TRG "	4-HITROPHENOL	1700	UG/KG	= =	2001	_	
22-AUG-93 TRG   BHACLP ACENAPHTYLENE 350 UG/KG U 330 V 10-AUG-93 TRG   NOACLP ALEMINUM 4360 UG/KG U 10 JA 49 LG-AUG-93 TRG   SHETCLP ALLMINUM 4360 UG/KG U 330 V 25-AUG-93 TRG   SHETCLP ALLMINUM 5.4 MG/KG U 12 JA 12 LG-AUG-93 TRG   SHETCLP ANTIMONY 5.4 MG/KG U 12 JA 12 LG-AUG-93 TRG   SHETCLP ANTIMONY 5.4 MG/KG U 12 JA 12 LG-AUG-93 TRG   SHETCLP ANTIMONY 5.4 MG/KG U 12 JA 12 LG-AUG-93 TRG   SHETCLP ANTIMONY 5.4 MG/KG U 12 JA 12 LG-AUG-93 TRG   SHETCLP ANTIMONY 5.4 MG/KG U 12 JA 12 LG-AUG-93 TRG   SHETCLP BARIUM 79.4 MG/KG U 1330 A 12 LG-AUG-93 TRG   SHACLP BENZO(a)ANTHRACENE 52 UG/KG J 3330 A 12 LG-AUG-93 TRG   BHACLP BENZO(b)FLUORANTHENE 350 UG/KG J 3330 A 27-AUG-93 TRG   BHACLP BENZO(chi)PERYLENE 350 UG/KG J 3330 A 3330	22-AUG-93 TRG BHACLP ACENAPHTYLENE 350 UG/KG U 330 V 10-AUG-93 TRG SHETCLP ALLWINUM 4360 UG/KG U 10 JA 49 25-AUG-93 TRG SHETCLP ALLWINUM 4360 UG/KG U 330 V 25-AUG-93 TRG SHETCLP ALTHROWY 5.4 MG/KG U 12 JA 12 25-AUG-93 TRG SHETCLP ANTIHONY 5.4 MG/KG U 12 JA 12 27-AUG-93 TRG SHETCLP ANTIHONY 5.4 MG/KG U 12 JA 12 27-AUG-93 TRG SHETCLP ARSENIC 3.5 MG/KG U 12 JA 12 27-AUG-93 TRG SHETCLP BARIUM 79-4 MG/KG U 12 JA 12 27-AUG-93 TRG SHETCLP BENZO(a)ANTHRACENE 5.5 UG/KG U 330 A 27-AUG-93 TRG BHACLP BENZO(a)PYRENE 47 UG/KG J 330 A 27-AUG-93 TRG BHACLP BENZO(b)FLUORANTHENE 350 UG/KG J 330 V 27-AUG-93 TRG BHACLP BENZO(b)FLUORANTHENE 350 UG/KG J 330 V 27-AUG-93 TRG BHACLP BENZO(b)FLUORANTHENE 350 UG/KG J 330 V 27-AUG-93 TRG BHACLP BENZO(b) PFRYLENE 350 UG/KG J 330 V 27-AUG-93 TRG BHACLP BENZO(b) PFRYLENE 350 UG/KG J 330 V	?	27-AUG-93 TRG "	ACENAPHTHENE	350	UG/KG	<b>,</b> =			
10-AUG-93 TRG	10-AUG-93 TRG	?	27-AUG-93 TRG /	ACENAPHTHYLENE	350	JIG/KG	<b>=</b>	2000		
22-AUG-93 TRG SHETCLP ALUMINUM 4360 MG/KG U 340 V 27-AUG-93 TRG BHACLP ANTHRACENE 350 UG/KG U 320 V 25-AUG-93 TRG SHETCLP ANTHRONY 5.4 MG/KG U 12 JA 1	22-MIG-93 TRG SHETCLP ALUMINUM 4360 MG/KG U 57 V C V V C V V V C V V V V V V V V V V	5 :	TU-AUG-93 TRG .	ACETONE	36	lla/re	• =	2000	. :	
22-AIG-93 TRG BNACLP ANTHRACENE 350 UG/KG U 330 V 25-AIG-93 TRG SHETCLP ANTIHONY 5.4 MG/KG U 12 JA 12 13-SEP-93 TRG SHETCLP ARSENIC 3.5 MG/KG U 12 JA 12 27-AIG-93 TRG SHETCLP Aldol Condensation 19000 UG/KG U 12 JA 12 25-AIG-93 TRG SHETCLP BARIUM 79-4 MG/KG AJ 330 A 10-AIG-93 TRG BNACLP BENZO(a)PYRENE 55 UG/KG J 330 A 27-AIG-93 TRG BNACLP BENZO(a)PYRENE 62 UG/KG J 330 A 27-AIG-93 TRG BNACLP BENZO(b)FLUORANTHENE 350 UG/KG J 330 A 27-AIG-93 TRG BNACLP BENZO(b)FLUORANTHENE 350 UG/KG J 330 A 27-AIG-93 TRG BNACLP BENZO(c)FLUORANTHENE 350 UG/KG U 330 V	22-AUG-93 TRG BHACLP ANTHRACENE 350 UG/KG U 330 V 25-AUG-93 TRG SHETCLP ANTIHONY 5.4 MG/KG U 12 JA 12	?	Z>-AUG-95 TRG :	ALIMINUM	4360	MG/KG	•	2 9	<b>^</b>	
22-AUG-93 TRG SHETCLP ANTIMONY 5.4 MG/KG U 12 JA 12 13-SEP-93 TRG SHETCLP ARSENIC 3.5 MG/KG U 12 JA 12 27-AUG-93 TRG SHETCLP ARACH AIdol Condensation 19000 UG/KG AJ 2.0 y 10-AUG-93 TRG SHETCLP BARIUM 79-4 MG/KG U 5 y 10-AUG-93 TRG BHACLP BEHZO(a)PYRENE 52 UG/KG J 330 A 27-AUG-93 TRG BHACLP BEHZO(b)FLUORANTHENE 62 UG/KG J 330 A 27-AUG-93 TRG BHACLP BEHZO(b)FLUORANTHENE 350 UG/KG J 330 A 27-AUG-93 TRG BHACLP BEHZO(ch)PERYLENE 350 UG/KG U 330 y 27-AUG-93 TRG BHACLP BEHZO(ch)PERYLENE 350 UG/KG U 330 y	25-AUG-93 TRG SHETCLP ANTIHONY 5.4 MG/KG U 12 JA 12 13-SEP-93 TRG SHETCLP ARSENIC 3.5 MG/KG U 12 JA 12 27-AUG-93 TRC SHETCLP Aldol Condensation 19000 UG/KG AJ 2.0 V 25-AUG-93 TRG SHETCLP BRIZENE 5 UG/KG J 330 A 27-AUG-93 TRG BHACLP BEHZO(a)PYRENE 47 UG/KG J 330 A 27-AUG-93 TRG BHACLP BEHZO(a)PYRENE 47 UG/KG J 330 A 27-AUG-93 TRG BHACLP BEHZO(d)PFRIVENE 350 UG/KG J 330 A 27-AUG-93 TRG BHACLP BEHZO(G)FLUORANTHENE 350 UG/KG U 330 V	5	27-AUG-93 TRG	ANTHRACENE	350	lis/kg	=			
13-SEP-93 TRG SHETCLP ARSENIC 3.5 HG/KG 2.0 V 2.0 V 2.4 MG/KG AJ 2.0 V 2.	13-SEP-93 TRG SHETCLP ARSENIC 3.5 HG/KG 2.0 V 27-AUG-93 TRG SHETCLP Aidol Condensation 19000 UG/KG AJ 2.0 V 2.0 V 25-AUG-93 TRG SHETCLP BARIUM 79-4 HG/KG AJ 3.0 A 12 AUG-93 TRG SHACLP BENZO(a)ANTHRACENE 52 UG/KG J 3.30 A 27-AUG-93 TRG BHACLP BENZO(a)PYRENE 47 UG/KG J 3.30 A 27-AUG-93 TRG BHACLP BENZO(b)FLUORANTHENE 3.50 UG/KG J 3.30 A 3	?	25-AUG-93 TRG	ANTIMONY	7.5	MG/KG	<b>)</b> =	֓֞֝֜֝֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֡֓֓֡֓֡֓֓֓֓֡֓֓֡֓֡֓֡֓֡	. :	
27-AUG-93 TIC TIC BHACLP Aldol Condensation 19000 UG/KG AJ 2.0 V 25-AUG-93 TRG SHETCLP BARIUM 10-ALG-93 TRG SHETCLP BENZENE 5 UG/KG U 5 V 27-ALG-93 TRG BHACLP BENZO(a)ANTHRACENE 52 UG/KG J 330 A 27-ALG-93 TRG BHACLP BENZO(a)PYRENE 47 UG/KG J 330 A 27-ALG-93 TRG BHACLP BENZO(b)FLUORANTHENE 350 UG/KG U 330 V 27-ALG-93 TRG BHACLP BENZO(ch)FLUORANTHENE 350 UG/KG U 330 V	27-AUG-93 TIC TIC BHACLP Aldol Condensation 19000 UG/KG AJ 2.0 V 25-AUG-93 TRG SHETCLP BARIUM 10-ALG-93 TRG SHETCLP BENZENE 5 UG/KG U 5 V 27-ALG-93 TRG BHACLP BENZO(a)ANTHRACENE 52 UG/KG J 330 A 27-ALG-93 TRG BHACLP BENZO(b)FLUORANTHENE 350 UG/KG J 330 A 27-ALG-93 TRG BHACLP BENZO(k)FLUORANTHENE 350 UG/KG U 330 V 27-ALG-93 TRG BHACLP BENZO(k)FLUORANTHENE 350 UG/KG U 330 V	•	13-SEP-93 TRG	ARSENIC		MC 14.0	>	יי ער	2L Y	
25-AUG-93 TRG SHETCLP BARIUM 10-ALG-93 TRG VOACLP BENZENE 5 UG/KG U 5 V 27-ALG-93 TRG BHACLP BENZO(a)ANTHRACENE 52 UG/KG J 330 A 27-ALG-93 TRG BHACLP BENZO(a)PYRENE 47 UG/KG J 330 A 27-ALG-93 TRG BHACLP BENZO(b)FLUORANTHENE 350 UG/KG J 330 A 27-ALG-93 TRG BHACLP BENZO(\$\frac{1}{2}\frac	25-AUG-93 TRG SHETCLP BARIUM 10-AUG-93 TRG VOACLP BENZENE 5 UG/KG U 5 V 27-AUG-93 TRG BNACLP BENZO(a)ANTHRACENE 52 UG/KG J 330 A 27-AUG-93 TRG BNACLP BENZO(a)PYRENE 47 UG/KG J 330 A 27-AUG-93 TRG BNACLP BENZO(b)FLUORANTHENE 350 UG/KG J 330 V 27-AUG-93 TRG BNACLP BENZO(k)FLUORANTHENE 350 UG/KG U 330 V	7	27-AUG-93 TIC TIC	Aldol Condensation	1000	16/NG	•	Z.0 V		
10-AUG-93 TRG VOACLP BENZENE 55 UG/KG U 5 V JA 12 Z7-AUG-93 TRG BNACLP BENZO(a)ANTHRACENE 52 UG/KG J 330 A 27-AUG-93 TRG BNACLP BENZO(a)PYRENE 47 UG/KG J 330 A 27-AUG-93 TRG BNACLP BENZO(b)FLUORANTHENE 62 UG/KG J 330 A 27-AUG-93 TRG BNACLP BENZO(ghi)PENYLENE 350 UG/KG U 330 V 27-AUG-93 TRG BNACLP BENZO(k)FLUORANTHENE 350 UG/KG U 330 V 330 V	10-AUG-93 TRG VOACLP BENZO(a)ANTHRACENE 57 UG/KG U 5 V 12 AUG-93 TRG BHACLP BENZO(a)ANTHRACENE 57 UG/KG J 330 A 27-AUG-93 TRG BHACLP BENZO(b)FLUORANTHENE 67 UG/KG J 330 A 27-AUG-93 TRG BHACLP BENZO(b)FLUORANTHENE 350 UG/KG J 330 V 27-AUG-93 TRG BHACLP BENZO(k)FLUORANTHENE 350 UG/KG U 330 V 4 AUG-93 TRG BHACLP BENZO(k)FLUORANTHENE 350 UG/KG U 330 V	?	25-AUG-93 TRG	BARTIN	3	20/KG	2			
27-AUG-93 TRG BUACLP BENZO(a)ANTHRACENE 52 UG/KG J 27-AUG-93 TRG BUACLP BENZO(a)PYRENE 47 UG/KG J 27-AUG-93 TRG BUACLP BENZO(b)FLUORANTHENE 62 UG/KG J 27-AUG-93 TRG BUACLP BENZO(ghi)PERYLENE 350 UG/KG U 27-AUG-93 TRG BUACLP BENZO(k)FLUORANTHENE 350 UG/KG U 3	27-AUG-93 TRG BUACLP BENZO(a)ANTHRACENE 52 UG/KG J 3 2 UG/KG J 3 3 27-AUG-93 TRG BUACLP BENZO(b)FLUORANTHENE 62 UG/KG J 3 3 27-AUG-93 TRG BUACLP BENZO(ghi)PERYLENE 350 UG/KG U 3 27-AUG-93 TRG BUACLP BENZO(k)FLUORANTHENE 350 UG/KG U 3 3 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	-	10-AUG-93 TRG	BENZENE	*	MG/KG	;	9		
27-AUG-93 TRG BRACLP BENZO(a)PYRENE 27 UG/KG J 3 3 27-AUG-93 TRG BRACLP BENZO(b) FLUORANTHENE 62 UG/KG J 3 3 27-AUG-93 TRG BRACLP BENZO(ghi)PERYLENE 350 UG/KG U 3 3 27-AUG-93 TRG BRACLP BENZO(k) FLUORANTHENE 350 UG/KG U 3 3 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	27-AUG-93 TRG BRACLP BENZO(a)PYRENE 27- UG/KG J 3 3 27-AUG-93 TRG BRACLP BENZO(b)FLUORANTHENE 62 UG/KG J 3 3 27-AUG-93 TRG BRACLP BENZO(ghi)PERYLENE 350 UG/KG U 3 3 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	-	27-AUG-93 TRG	が行っているとはなるとはなる	. :	UG/KG	>	> '		
27-AUG-93 TRG BUACLP BENZO(b) FLUORANTHENE 62 UG/KG J 27-AUG-93 TRG BUACLP BENZO(b) FLUORANTHENE 350 UG/KG U 27-AUG-93 TRG BUACLP BENZO(k) FLUORANTHENE 350 UG/KG U	27-ANG-93 TRG BNACLP BENZO(B)FLUORANTHENE 62 UG/KG J 27-ANG-93 TRG BNACLP BENZO(R)FLUORANTHENE 350 UG/KG U 27-ANG-93 TRG BNACLP BENZO(R)FLUORANTHENE 350 UG/KG U		27-AUG-93 TRG	MENTO( A NOVEME	26	UG/KG	7	330 A	_	
27-AUG-93 TRG BUACLP BENZO(K)FLUORANTHENE 350 UG/KG U 27-AUG-93 TRG BUACLP BENZO(K)FLUORANTHENE 350 UG/KG U	27-AUG-93 TRG BRACLP BENZO(K)FLUORANTHENE 350 UG/KG U		27-AUG-93 TRG	DENYOCK ELIODENT		DG/KG	~	330 A	_	
27-AUG-93 TRG BRACLP BENZO(k)FLUORANTHENE 350 UG/KG U	27-AUG-93 TRG BRACLP BENZO(k)FLUORANTHENE 350 UG/KG U	•	27-MIG-93 TPG	DERZO(D) TROUNDE BENE	29	UG/KG	~	330 A		
STATE STATE STATE SENTINGENE US/KG US.	STATE OF THE STATE		27-AIG-04 TDG	BENZO(gn1)PERTLENE	320	UG/KG	<b>-</b>	330 V		
<b>-</b>			B41 77 300 14	BENZO(K)FLUOKANTHENE	350	UG/KG	2	330 V		
				•						

CLIENT ID NO.

Lab Name: L.A.	.s		Contract: R	OCKY_FLAT		02
Lab Code: LOCE						L2608S
Matrix (soil/v	ater): SOIL			Lab Sampl	e ID: L260	8-2
Level (low/med	i): LOW_			Date Rece	ived: 08/1	0/94
% Solids:	100.	0	-			
Co	ncentration	Units (ug/	L or mg/kg dr	y weight):	MG/KG	
	7440-39-3 7440-41-7 7440-43-9	Aluminum Antimony Arsenic Barium Beryllium Cadmium Calcium Chromium Cobalt Copper Iron Lead Magnesium Manganese Mercury Nickel Potassium	62.1 128 0.60 1.4 	B	M PNR PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	
Color Before:	BROWN	Clarit	y Before:		Texture:	MEDIUM
Color After:	YELLOW	Clarit	y After:		Artifacts:	
Comments: D						

FORM I - IN

Pg 370(51

CLIENT ID NO.

Lab Name: L.A	.s		Contract: R	OCKY_FLAT	C023502
				_	SDG No.: L2608S
Matrix (soil/	water): SOIL	_		Lab Samp	ole ID: L2608-7
Level (low/med	1): LOW_	_	•	Date Rec	eived: 08/10/94
* Solids:	100.	0			
Co	oncentration	Units (ug	/L or mg/kg dr	y weight)	: MG/KG
	CAS No.	Analyte	Concentration	C Q	м
		Antimony_ Arsenic_		DB UB UB W UB W	PNR PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP
Color Before:	BROWN	Clarit	y Before:		Texture: COURSE
Color After:	COLORLESS	Clarit	y After:	<u> </u>	Artifacts:
Comments:	SCREEN	OVERSIZE	No I		
		·	DW T - TW	1.71	

CLIENT ID NO.

Lab Name: L.A.	.s.		Contract: R	OCKY_FLA	C023602
					SDG No.: L2608S
Matrix (soil/v					ple ID: L2608-6
•		<del>_</del>			
Level (low/med	i): LOW_	<del>-</del>	•	Date Re	ceived: 08/10/94
₹ Solids:	100.	0			
Co	ncentration	Units (ug	/L or mg/kg dr	v weight	): MG/KG
	1	· •	·	, , , , , , ,	
	CAS No.	Analyte	Concentration	C Q	м
	7429-90-5	Aluminum	3380		-  <del>p</del> -
	7440-36-0	Antimony_	1	! -	NR
	7440-38-2	Arsenic_	61.3	0	
	7440-39-3	Barium	222		P P P
	7440-41-7	Beryllium	0.34		_ P_
	7440-43-9	Cadmium_	0.79	ט	P P
	7440-70-2	Calcium_	279000		
	7440-47-3	Chromium_	3.4	ס —	
	7440-48-4	Cobalt Copper	6.5	<sup> </sup>	p- P-
	7439-89-6	Iron	1960	-	P-
	7439-92-1	Lead	17.0	ט	- P-
	7439-95-4	Magnesium	3510	"	[p_]
		Manganese	112	-	-   P -
		Mercury	- 0.05	₩	ĀŪ
	7440-02-0	Nickel	2.6	В	T P I
1	7440-09-7	Potassium	723	В	_  p_
	7782-49-2	Selenium_		UW	_ F_
		Silver	1:4	ם	P P
	7440-23-5	Sodium	707	В	_  <u>P</u> _
		Thallium_		ען	
	7440-62-2	Vanadium_	8.2	В	p_ p_
	7440-66-6	Zinc :	- 44.5	_	-
				_	-
Color Before:	BROWN	Clarit	y Before:		Texture: COURSE
Color After:	YELLOW	Clarit	y After:		Artifacts:
	4				
Comments: TRY	SCREEN O	VERSIZE	No2 -		
		ŧ.			
•		f c			
	· · · · · · · · · · · · · · · · · · ·	. 70	RM I - IÑ	-	
	 	FO.	KM T - TW	-	
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CLIENT ID NO.

Lab Name: L.A	.s		Contract: R	OCKY_FLAT	r	
			ORFW SAS No.			L2608S
Matrix (soil/	water): SOIL	<b>_</b>		Lab Sam	ple ID: L26	08-1
Level (low/med	d): LOW_			Date Red	ceived: 08/	10/94
% Solids:	100.	0				
Co	oncentration	Units - (ug	/L or mg/kg dr	y weight)	: MG/KG	
	l <del></del>	т			<del></del> 1	
	CAS No.	Analyte	Concentration	C Q	M	
	7429-90-5	Aluminum_	12800		P	
	7440-36-0 7440-38-2	Antimony_ Arsenic_	61.9		NR	
	7440-39-3	Barium	iii2		P P	
	7440-41-7	Beryllium	0.78		P	
	7440-43-9	Cadmium_	0.80	ט	P_	
	7440-70-2	Calcium	11300	_		
	7440-47-3	Chromium_	12.2	B	P- 0 /0	
	7440-48-4	Cobalt		B		<b>)</b>
	7440-50-8	Copper	11000	_ -	p-  4	
	7439-89-6 7439-92-1	Iron	37.5		·  5-  <	
	7439-95-4	Magnesium			p	4/5
	7439-96-5	Manganese			- P	\(\frac{1}{2}\)
	7439-97-6	Mercury	0.05	m	ĀŪ	
	7440-02-0	Nickel	11.6	<u> ۱</u>	·   P	•
	7440-09-7	Potassium	2790	_	P P F	
	7782-49-2	Selenium	0.90	B	F	
	7440-22-4	Silver			[P]	
	7440-23-5	Sodium	628	B	p -	
	7440-28-0	Thallium	0.80	<u>ה</u>	`\ \\ \	
	7440-62-2	Vanadium	22.9		P-	
	7440-66-6	Zinc	49.1		P_	
Color Before:	BROWN	Clarit	y Before:		Texture:	MEDIUM
Color After:	YELLOW	Clariț	y After:		Artifacts:	
Comments:	er Screen	UNDERSIZ	E			
<u> </u>			h.			<u></u>
	!	·- EV	PM T TN			<del></del>

·', 40 of 51

CLIENT ID NO.

		**! A1/A1/A1# A	WWWIGES DAIN	SUNE!		
من Name: L.A.	s		Contract: 1	rocky_flat	94102	2501
			SRFW SAS No.	. :	SDG No.:	L2134S
atrix (soil/v	water): SOII	·		Lab Sampl	e ID: L213	34-6
evel (low/med	i): Low_	_		Date Rece	ived: 06/1	5/94
Solids:	100.	0				
Cc	ncentration	Units (ug	/L or mg/kg di	cy weight):	MG/KG	40
	-	T	1	<del></del>		A387
	CAS No.	Analyte	Concentration	1 1 1	M	1,
	7429-90-5 7440-36-0	Aluminum_ Antimony_	35.4	E		
11, , ,	7440-38-2	Arsenic	) · · · · · · · · · · · · · · · · · · ·	ŭ		1
	7440-39-3 7440-41-7	Barium Beryllium	0.20 0.80 153 0.99 2.2 0.99	[ ]	5-1	
	7440-43-9	Cadmium	0.80	0		
	7440-70-2	Calcium Chromium	0.99		5-	
	7440-48-4	Cobalt	2.2	0		**
	7440-50-8	Copper	120		5-	•
• •	7439-92-1	Lead Magnesium	8.4			-
	7439-96-5	Manganese	22.5 0.99	B 3	_	
· ~	7439-98-7	Molybdenu Nickel	5.2		]	
	7440-09-7	Potassium	96.1	<u> </u>		
•	7782-49-2	Selenium_ Silver_	22.5		3-1	
••	7440-23-5 7440-24-6	Sodium Strontium	437	B E		
	7440-28-0	Thallium	1.3	ם	-	
	7440-62-2	Vanadium_ Zinc	2.0	B	<b>=</b>	
	7440-88-8	24110				,
Color Before:	GREY	Clarit	y Befora:		exture:	COARSE
Color After:	COLORLESS	Clarit	y After:	A	rtifacts:	
Comments:	<u> </u>	$\Omega$	)			
	TROWM EL	OVER S	128			
						<del></del>
•		FO	RMI - IN	RAPE		
. * Post-it* brand fax	termonible	one landaria i	' <i>II</i> I)	ECEU		
Y2 5	transmittal memo 7	· · · · · · · · · · · · · · · · · · ·	Ilik	7 77 0		
Co. Davek	skeve ca	Dave Aco	Ten	J. A.Z. 6 199	94	037
Dept.	Phene		I'' U		ושו_	<b>4 9</b> 7
Env 0	. Fax #	- 43				

CLIENT ID NO.

Lab Name: L.A.	s.		Contract: R	OCKY_FLAT	C0239	02
Lab Code: LOCK				:	SDG No.:	L2608S
Matrix (soil/w					le ID: L260	
Level (low/med					eived: 08/1	_
% Solids:	100.	<del>_</del>	-			
			/L or mg/kg dr	v weight)	. MG/KG	
	1			, ,,,,,,,,	<del></del> 1	
	CAS No.	Analyte	Concentration	C Q	м	
	7429-90-5	Aluminum_	7510		Þ	
	7440-36-0	Antimony_ Arsenic	61.8	TT	NR P	
	7440-39-3	Barium	73.2		P	
	7440-41-7	Beryllium	0.42		p_ p_	
	7440-43-9	CadmiumCalcium	0.80			
	7440-70-2	Chromium	8.2			
	7440-48-4	Cobalt	3.0	B	P (1)	
	7440-50-8	Copper	50.8			1/ ^
	7439-89-6	Iron	11600		P	/52
	7439-92-1 7439-95-4	Lead Magnesium	55.0		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\
	7439-96-5	Manganese	144		p-	4
	7439-97-6	Mercury	0.06			
	7440-02-0	Nickel	14.2		P	
	7440-09-7	Potassium Selenium	1330	BW	F-	
	7782-49-2	Silver	1.4		P-	
	7440-23-5	Sodium	1720		P	
	7440-28-0	Thallium_	0.80	<u>ס</u>	FT!	
	7440-62-2	Vanadium_	12.5		₽_	
	7440-66-6	Zinc	62.0	-	P_	
Color Before:	GREY	Clarit	y Before:		Texture:	COURSE
Color After:	YELLOW	Clarit	y Afteri		Artifacts:	
Comments: -	ROMMEL VI	1 a Car	- 1"	-		
	COMME V	NDERNILL				
		. ,				
			*			
		FO	RM I - IN			
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CLIENT ID NO.

94T022701

Lab Name: L.A.	.s		Contract: R	OCKY_FLAT	·	
Lab Code: LOCI	Ca	se No.: 61	erfw Sas No.	:	EDG No.:	L2134S
Matrix (soil/	rater): SOIL	L.,		Lab Samp	le ID: L213	4-8
Level (low/med	i): Low_			Date Rec	eived: 06/1	5/94
* Solids:	100.	ο .				
Co	ncentration	Units (ug	/L or mg/kg dr	y weight)	: MG/KG	•
-	1			-	<del></del> 1	
		Analyte	1	1 I	M	
	7429-90-5 7440-36-0	Aluminum_	4950	*	P	
	7440-36-0	Antimony_	6.8 17.3		5-	
	7440-38-2	Arsenic_ Barium_	59.0		וים ו <sup>יי</sup> ם ו	
	7440-41-7	Beryllium	0.31	B	2_	
	7440-43-9	Beryllium Cadmium_	0.81	I D I	p_ p_	
	7440-70-2	Calcium_ Chromium_	7340		p-	
	7440-47-3	Cohe I t	2:7	B	p_ p_	
	7440-50-8	Copper	24.8		P_	
	7439-89-6	Cobalt Copper Iron	4340	*	p p	
	7439-92-1	Lead	25.1	-	<b>p</b> _	
	7439-95-4	Magnesium	. 927	1 }	p	
	7439-96-5	Manganese Molybdenu	5.2 7.9	0	P	
	7440-02-0	Nickel	7.9	B	p	
	7440-09-7	Potassium	1250		p-	
	7782-49-2	Selenium_ Silver_	1.0	181	5-	
	7440-23-5	Sodium	1380		P_	
	7440-24-6	Sodium Strontium Thallium	34.7		[ <u>P</u> _	
	7440-28-0	Thallium_	101	[U]	<b>S</b> -	
	7440-62-2	Vanadium_ Zinc	10.4	-	p   p   p	
	7440-66-6	ZINC				
Color Before:	BLACK	Clari	ty Before:		Texture:	COARSE
Color After:	ARLTOM	Clari	ty After:		Artifacts:	YES
Comments: GRASS,_ROOM	rs_and_stems	WE	T SCREEN O	VERSIZE		
		724	TY - TW			

T CLIENT ID NO.

94T023101 Contract: ROCKY\_FLAT Lab Name: L.A.S.\_\_\_\_ Case No.: 615RFW SAS No.: \_\_\_\_\_ SDG No.: L21348 Lab Code: LOCK\_ Lab Sample ID: L2134-11\_ Matrix (soil/water): SOIL\_ Date Received: 06/15/94 Level (low/med): LOW\_\_\_ \* Solids: 100.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5 7440-36-0 7440-38-2 7440-39-3 7440-41-7 7440-43-9 7440-47-3 7440-48-4 7440-50-8 7439-89-6 7439-95-4 7439-96-5 7439-96-5 7439-98-7 7440-02-0 7440-09-7 7782-49-2	Aluminum Antimony Arsenic Barium Beryllium Cadmium Calcium Chromium Cobalt Copper Iron Lead Magnesium Manganese Molybdenu Nickel Potassium Selenium Silver	1330 13.3 17.2 21.3 0.29 0.80 2000 4.5 2.2 6.3 10500 377 475 178 5.2 4.1 227 22.6	מכתמת מון כו כמתכוו		
7440-22-4 7440-23-5 7440-24-6 7440-28-0 7440-62-2 7440-66-6					

Color	Before:	BROWN	Clarity	Before:		Texture:	MEDIUM
Color	After:	COLORLESS	Clarity	After:		Artifacts:	
Comme	nes: Hu-	CH 1 TABLE	CONC		•		
						<del></del>	<del></del>

CLIENT ID NO.

Lab Name: L.A.S	Co	stract: ROCKY_FLAT	94T022601
Lab Code: LOCK		SAS No.:	SDG No.: L21348
Matrix (soil/water):			ID: L2134-7
Level (low/med):	LOW	Date Rece:	ived: 06/15/94
* 90114=+	100.0		

Concentration Units (ug/L or mg/kg dry weight): MG/KG

7429-90-5 Aluminum 1110						
7440-36-0 Antimony 8.8 B	M	Q	C	Concentration	Analyte	CAS No.
7440-36-0 Antimony 8.8 B	<b>P</b> _			1110	Aluminum	7470-00-5
7440-38-2 Arsenic 17.3 U 7440-39-3 Barium 12.7 B 7440-41-7 Beryllium 0.20 U 7440-43-9 Cadmium 0.80 U 7440-47-3 Chromium 2.3 7440-48-4 Cobalt 2.2 U 7440-50-8 Copper 4.5 B 7439-89-6 Iron 2730 7439-92-1 Lead 10.9	<b>P</b> _		B			
7440-39-3 Barium	P_				Zzennia.	
7440-41-7 7440-43-9 7440-70-2 7440-47-3 7440-48-4 7440-50-8 7440-50-8 7439-92-1 7439-95-4 7439-96-5 7439-96-5 7439-98-7 7440-02-0 7440-02-4 7440-02-4 7440-22-4 7440-22-4 7440-22-4 7440-23-5 7440-2	P-					
7440-70-2 Calcium 3670 7440-47-3 Chromium 2.3 7440-48-4 Cobalt 2.2 U 7440-50-8 Copper 4.5 B 7439-89-6 Iron 2730 7439-92-1 Lead 10.9 Magnesium 374 B 7439-96-5 Manganese 37.4 7439-98-7 Molybdenu 5.2 U 7440-02-0 Nickel 2.6 U 7440-02-7 Selenium 351 B 7440-22-4 Silver 2.6 B	<b>P</b> -		77		Barrel 1 1 177	
7440-70-2 Calcium 3670 7440-47-3 Chromium 2.3 7440-48-4 Cobalt 2.2 U 7440-50-8 Copper 4.5 B 7439-89-6 Iron 2730 7439-92-1 Lead 10.9 Magnesium 374 B 7439-96-5 Manganese 37.4 7439-98-7 Molybdenu 5.2 U 7440-02-0 Nickel 2.6 U 7440-02-7 Selenium 351 B 7440-22-4 Silver 2.6 B	P				Der Arrram	
7440-47-3 Chromium 2.3 7440-48-4 Cobalt 2.2 U 7440-50-8 Copper 4.5 B 7439-89-6 Iron 2730 7439-92-1 Lead 10.9 7439-96-5 Manganese 37.4 7439-96-5 Molybdenu 5.2 U 7440-02-0 Nickel 2.6 U 7440-09-7 Potassium 351 B 7440-22-4 Selenium 22.7 U 7440-22-4 Selenium 23.7 U 7440-23-5 Selenium 362 B	P_		٦	3670	Caomiun_	
7440-48-4   Cobalt   2.2 U   7440-50-8   Copper   4.5 B   7439-89-6   Iron   2730     7439-95-4   Magnesium   374 B   7439-96-5   Manganese   37.4   7439-98-7   Molybdenu   5.2 U   7440-02-0   Nickel   2.6 U   7440-09-7   Potassium   351 B   7782-49-2   Selenium   22.7 U   7440-23-5   Soldium   262 B   362 B   362 B   363 B	₽_		-	30,70		
7439-89-6   Iron	5-		-		Curomium_	
7439-89-6   Iron	ם   	]				7440-48-4
7439-89-6   Iron	<u> </u>		В		Copper	7440-50-8
7439-95-4 Magnesium 374 B 7439-96-5 Manganese 37.4 7439-98-7 Molybdenu 5.2 U 7440-02-0 Nickel 2.6 U 7740-09-7 Potassium 351 B 7740-22-4 Selenium 22.7 U 7440-22-4 Silver 1.0 U 7440-23-5 Soldium 362 B	P_	*			Iron	7439-89-6
7439-95-4 Magnesium 7439-96-5 Manganese 7439-98-7 Molybdenu 7440-02-0 Nickel 7440-09-7 Potassium 7782-49-2 Selenium 7440-22-4 Silver 7440-23-5 Sodium 7440-33-5 Sodium	2		<u>  _  </u>		Lead	7439-92-1
7439-96-5 Manganese 37.4 7439-98-7 Molybdenu 5.2 U 7440-02-0 Nickel 2.6 U 7440-09-7 Potassium 351 B 7782-49-2 Selenium 22.7 U 7440-22-4 Silver 1.0 U 7440-23-5 Sodium 362 B	P_		3	374	Magnesium	
7439-98-7 Molybdenu	P_	*		37.4	Manganese	
7440-09-7 Potassium 351 B 7782-49-2 Selenium 22.7 U 7440-22-4 Silver 1.0 U 362 B	P_ P_		U	5.2	Malyhdenu	
7440-09-7 Potassium 351 B 7782-49-2 Selenium 22.7 U 7440-22-4 Silver 1.0 U 362 B	<b>P</b> _					
7440-22-4 Silver 1.0 U 362 B	<b>p</b> —					
7440-22-4 Silver 1.0 U 362 B	P				AOCTAR TIME	
7440-22-5   Sodiym 262   B	<b>P</b> _				Serenzini	
7440-23-5   Bodium	<b>P</b> -					
	5-	<del></del>		262		
744U-24-6   BCTORCTUR	P - P		-		Strontium	7440-24-6
7440-28-0 Thallium 100 U	<u>_</u> _				Thallium_	
7440-62-2   Vanadium   6.5   B	<b>-</b>		B			7440-62-2
7440-66-6 Zinc10.5	P_	ll		10, 5	Zinc -	7440-66-6
						, • • • •

Color Be	efore:	BROWN	_	Clarity	Before:	<del></del>	Texture:	MEDIUM
Color Af	iter:	COLORLES	S	Clarity	After:		Artifacts:	
Comment:	Hu	TCH 1	/ABLE	TAIL				
			•					

FORM I - IN

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SW - 846

INORGANIC ANALYSES DATA SHEET

Lab Name: L.A.	e.	•	Contract: RG	CKY_FLAT	94T023	201
Lab Code: LOCK	·	- 20 . 511	KDTW SAS NO.	•••• !	SDG No.:	L2134S
Matrix (soil/w	ater): SOIL	-		_	e ID: L213	
Level (low/med	): LOW_	<b>-</b> ,		Date Rece	ived: 06/1	5/94
% Solids:	100.0	•	• :	•		
			/L or mg/kg drj	y weight):	MG/KG	
	CAS No.	Analyte	Concentration		M	
	7429-90-5 7440-36-0 7440-38-2 7440-39-3 7440-43-9 7440-43-9 7440-48-4 7440-50-8 7439-98-6 7439-95-4 7439-96-5 7439-96-5 7439-98-7 7440-02-0 7440-09-7	Antimony_ Arsenic_ Barium Beryllium Cadmium_ Calcium_ Chromium_ Cobalt_ Copper_ Iron Lead_ Magnesium Manganese Molybdenu Nickel_	17.3 14.5 0.20 0.80 3130 3.3 2.2 6.5 3310 18.8 410 41.4	U*		
	7440-23-2 7440-23-5 7440-24-6 7440-28-0 7440-62-2 7440-66-6	Selenium_ Silver_ Sodium Strontium	331 22.7 1.0 351 9.6 101 8.3	U B		
Color Before:	BROWN	Clari	y Before:		Texture:	MEDIUM
Color After:	COLORLESS	Clari	ty After:		Artifacts:	
Comments:	UT CH 2. 7	ABLE CAN	/C			·

CLIENT ID NO.

C024402

Lab Name: L.A.	·		Contract: R	OCKY_FLA:	·	
Lab Code: LOCK_	Ca	se No.: 81	ORFW SAS No.	:	SDG No.:	L2608S
Matrix (soil/wa	ater): SOIL	_		Lab Samp	ple ID: L26	08-3
Level (low/med)	: LOW_	<del></del>		Date Red	ceived: 08/	10/94
* Solids:	100.	0				
Cor	centration	Units (ug	/L or mg/kg dry	y weight)	: MG/KG	
	CAS No.	Analyte	Concentration	c Q	м	
	7440-02-0 7440-09-7 7782-49-2 7440-22-4 7440-23-5 7440-28-0	Antimony Arsenic Barium Beryllium Cadmium Calcium Chromium Cobalt Copper Iron Lead Magnesium Manganese Mercury Nickel Potassium Selenium Silver		B U U U U U U U U U U U U U U U U U U U	PROPERTO ACERDANA	
Color Rofers	CDEW		Todaya.		 	13 <b>1111</b>
Color Before:					Texture:	fine
Color After:	COLORLESS	Clarit	y After:		Artifacts:	
Comments: Hu7	CH 2 TAG	RLE TAIL				
		FO!	RM I - IN			

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Pg 47 of SI

CLIENT ID NO.

Lab Name: L.A.	, ŝ		Contract: R	OCKY_FLAT	947022	801
Lab Code: LOC					SDG No.:	121348
Matrix (soil/	rater): SOII	<u>_</u>		Lab Sampl	e ID: L213	4-9
Level (low/med	i): LOW	<del></del>		Date Rece	ived: 06/1	5/94
† Solids:	_		• .		•	•
•			/L or mg/kg drj	weight):	mg/kg	
	CAS No.	Analyte	Concentration	C Q 1	A	
	7429-90-5	Aluminum	1780		<b>P</b>	
	7440-36-0	Antimony	6.8	0	2-1	
	7440-38-2 7440-39-3	Arsenic	17.1 23.7	B		
	7440-41-7	Beryllium	0.20	0   1	2	
	7440-43-9	Cadmium_ Calcium	0.80	7		
	7440-47-3		2.8	-	5~	
	7440-48-4	Cobalt	2.2	נווס		
	7440-50-8		8.1		2_1	
	7439-89-6	Iron	3550	-	<u>-</u>	
	7439-92-1	Lead Magnesium	25.3 5 <i>6</i> 9	B	5-	
	7439-96-5	Manganese	58.1	4		
•	7439-98-7	Molybdenu	5.2			
	7440-02-0	Nickel	4.6	B	_	
		Potassium	427	B   F		
		Selenium_ Silver	22.5	당   f		
	7440-23-5	Sodium	346	ğ  ğ	<b>&gt;</b> -	·
	7440-24-6	Strontium	11.5			
	7440-28-0	Thallium_			3-1	
	7440-62-2	Vanadium_ Zinc	7.7	B   {		
	7440-68-6	21110				•
Color Before:	BROWN	Clarit	y Before:	I	exture:	MRDIU
olor After:	COLORLESS	Clarit	y After:	^	rtifacts:	
Comments:	LASSIFIER	CEEANOU	T-ORGANIC			

CLIENT ID NO.

Lab Name: L.A.	Ø.	•	Contract: R	OCKY_FLAT	941022	901
Lab Code: LOCK	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	- Xo - 61	KPPW SAS No.	1	SDG No.:	L21348
Matrix (soil/w	ater): SOIL	<b></b>		•	le ID: 1213	•
Level (low/med	): LOW_	_		Date Rec	eived: 06/1	5/94
t Solids:	100.	0				
*	ncentration	Units (ug.	/L or mg/kg drj	weight)	: MG/KG	
	CAS No.	Analyte	Concentration	C Q	M	
	7429-90-5	Aluminum_	225		P	
	7440-36-0	Antimony_ Arsenic_	6.8	<u> </u>	1 D - 1	
	7440-38-2	Barium	18.5	B	p_ p_ p_	
	7440-41-7	Barium Beryllium	0.20	<u>ש</u>	P_	
	7440-43-9	Cadmium	0.80	ם	P_	
	7440-70-2	Calcium_	I1700	*	P P	
	7440-47-3	Chromium_	2.3	<b>,,,</b>	<b>p</b> —	
	7440-48-4	Cobalt	2.3 2.2 2.3	<u> </u>	<b>5</b> _	
	7440-50-8	Copper	2560	P	5-	
	7439-89-6	Iron Lead	8.4	0	p <sup>-</sup>	
	7439-92-1	Magnesium	204	B	P	
	7439-95-4	Manganese	59.1		P_	
	7439-98-7	Molybdenu	5.2 		P	
		Nickel	2.6		[2_]	
	7440-09-7	Potassium	97.1	<u>u</u>	p_	
	7782-49-2	Selenium_	22.7 1.0	<u> </u>	p-	
	7440-22-4	Silver	238	S	5-	
	7440-23-5	Sodium Strontium	19.8	B	<b>p</b> -	
		Thallium	100	7	<b>P</b> -	
	7440-28-0	Vanadium	11.5		<b>2</b>	
	7440-66-6	Zinc	12.3		P	
	7440-00 0					
Color Before:	BROWN	Clari	y Before:	<del></del>	Texture:	COARS
Color After:	COLORLESS	Clari	y After:		Artifacts:	
Comments:	LASSIFIER	UNDER	ELUW			

HOCLIENT ID NO.

Lab Name: L.A.	.g		Contract: R	OCKY_FLAT	941023	301
Lab Code: LOCI	Ca.	se No.: 61	SRFW SAS No.	:	SDG No.:	L21348
Matrix (soil/				Lab Sampl		
Level (low/med			•	Date Rece	ived: 06/1	5/94
t Solids:	100.	0	-			
Co	oncentration	Units (ug	/L or mg/kg drj	y weight):	MG/KG	
•	CAS No.	Analyte	Concentration	C Q 1	M	•
	7429-90-5 7440-36-0 7440-38-2 7440-39-3 7440-41-7 7440-43-9 7440-47-3 7440-48-4 7440-50-8 7439-96-5 7439-96-5 7439-96-5 7440-02-0 7440-02-0 7440-23-5 7440-28-0 7440-66-6	Antimony Arsenic Barium Beryllium Cadmium Calcium Chromium Cobalt Copper Iron Lead Magnesium Manganese Molybdenu Nickel Potassium Selenium Silver Sodium Strontium Thallium Vanadium Zinc	22.5 191 1.1 1.0 18300 28.8 8.8 45.6 18500 84.9 4570 424 5.2 27.3 4080 22.7 1.0 1220 73.9 100 30.9 137	B		
Color Before:	GREY	Clarit	y Before:	a	Cexture:	COARSE
Color After:	ABITOM	Clarit	y After:	*	rtifacts:	<u>.                                    </u>
Comments:	O ENTRIPUCAL	ac Conc				

		INOEGLNIC	1 Analyses data (	SHEET	CLIENT ID NO.
Lab Name: L.A.S	•	•	Contract: R		94T023601
Lab Code: LOCK_		se No.: 61	•	:	SDG No.: L21348
Matrix (soil/wa	ter): SOII	j		Lab Sampl	le ID: L2134-3
Level (low/med)	: LOW_			Date Rece	eived: 06/15/94
* Solids:	100.	.0			
Con	centration	Units (ug	/L or mg/kg dry	y weight):	: MG/KG
	CAS No.	Analyte	Concentration	1111	M <del>D</del>

CAS No.	Analyte	Concentration	С	Q	M
7429-90-5	Aluminum	23800	-		7
7440-36-0	Antimony_	13.5			P
	Armenic	17.2	U		₽_
7440-38-2	Barium	241	_		<b>p</b> -
7440-39-3 7440-41-7	Beryllium	1.5			0. I
	Cadmium	1.1	-		B_
7440-43-9		22300	-	*	, <u>0</u>
7440-70-2	Calcium_	34.4			5-
7440-47-3	Chromium	9.7	B		5-
7440-48-4	Cobalt	58.8	-		5-
7440-50-8	Copper		-		5-
7439-89-6	Iron	22600	-		5-
7439-92-1	Lead	111	-		<b>5</b> -
7439-95-4	Magnesium	5630	_		£
7439-96-5	Manganese	522	_		¥
7439-98-7	Molybdenu	5.2	Ū		P_
7440-02-0	Nickel	32.9			P_
7440-09-7	Potassium	5260	1		₽_
7782-49-2	Selenium	22.6	U		<b>P</b> _
7440-22-4	Silver	1.0	Ū		<b>P</b> _
7440-23-5	Sodium	2840			P
7440-24-6	Strontium	83.2		-	
	Thallium	100	U		<b>p</b> -
7440-28-0		34.9			P-
7440-62-2	Vanadium_	162	-		P_
7440-66-6	zinc		-		-
	!	ا <u>ــــــــــــــــــــــــــــــــــــ</u>			

j						
Color Before:	BLACK	Clarity	Before:		Texture:	COARSE
Color After:	ARTTOM	Clarity	Afteri		Artifacts:	YES
Comments: ROCK_SLIVERS	HYDROC	YCLONE	OVER FL	io W		

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INORGANIC ANALYSES DATA SHEET

CLIENT ID NO.

					94T023801
Lab Name:	L.A.S	<u> </u>	_ Contract:	ROCKY_FLAT	
Lab Code:	LOCK	Case No.: 61	.5rpw sas n	···	SDG No.: L2134S

Lab Sample ID: L2134-15\_

Matrix (soil/water): SOIL\_

Level (low/med):

LOW\_\_

Date Received: 06/15/94

% Solids:

100.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

			_		
CAS No.	Analyte	Concentration	C	Q	м
7429-90-5	Aluminum	21400	<b> -</b>		2
		11.5	B		p_
7440-36-0	Antimony_	17.3	Ū		5-
7440-38-2	Arsenic		٦,		
7440-39-3	Barium	219	-		5-1
7440-41-7	Beryllium	1.4			[ <del>*</del> _
7440-43-9	Cadmium_	1.3	<b> </b> _		<b>1</b> —
7440-70-2	Calcium	22900	_	*	D _
7440-47-3	Chromium	30.3			P_
7440-48-4	Cobalt	10.1	_		
	Copper	45.9	_		P
7440-50-8		21300	-		P
7439-89-6	Iron	93.3	_	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	P_
7439-92-1	Lead		-		5-1
7439-95-4	Magnesium	5310			-a
7439-96-5	Manganese	498	-		<b>5</b> -
7439-98-7	Molybdenu	5.2	U		<b>5</b>
7440-02-0	Nickel	30.8	<b>.</b>		<b>-</b>
7440-09-7	Potassium	4550	-		2_
7782-49-2	Selenium	22.7	U		P_
7440-22-4	Silver	1.0	U		P_
	Sodium	1990		}	
7440-23-5	Strontium	79.5	<b>!</b> —		₽
7440-24-6	DETORPTION	100	U		<b>5</b> -
7440-28-0	Thellium_		٧.		p-
7440-62-2	Vanadium_	36.7	-		P_
7440-66-6	Zinc	141	<b>_</b>		[
			1_	]	<b> </b>
	1				

	BLACK	Clarity Before	Texture: Artifàcts:	COARSE
Color A Comment	 drocyclanb	Clarity After:	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,				